THE LANCET.

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COURSE OF LECTURES
ON THE
DISEASES OF THE EYE,
Delivered in 1840,
AT THE
ROYAL SCHOOL OF ANATOMY AND MEDICINE,
MANCHESTER,
By JOHN WALKER, Esq., Surgeon.
(Second Division.)

LECTURE XI.
Hemeralopia.

THERE still remain for consideration a few morbid or other irregular conditions of the eye, which, as their exact locality is not established, may now be brought in, as supplementary matter, in the present stage of the course.

The first of these which I shall notice is *hemeralopia*. This term, which is derived from the Greek, signifies day-blindness. In certain morbid states of the eye, the sufferers are unable to bear the smallest exposure to light; this may be said to be the case, more or less, in almost every inflammatory condition of the organ. We notice it more particularly, however, in the ophthalmia of strumous individuals: in this affection, the patient, as I before pointed out, cannot endure the full light of day for an instant; but if he be placed in a darkened situation, he is able to use his eyes with considerable freedom. This is the case also with the Albino, who retires from the glare of day, and prefers rambling about in the evening; and hence he is often called moon-eyed. But it occasionally happens that this condition is observed in individuals whose eyes have been previously healthy, and who do not exhibit any of the ordinary appearances of disease or malformation; and to this the term hemeralopia may be properly applied. This disease is probably owing to some morbid state of the nervous system of the eye, and more especially of the nerves of common sensation, either in their origin, course, or final distribution. I do not perceive that it is in any way connected with disorder of the retina, consequently I do not agree with those who regard it as a variety of amaurosis. I make this remark, because I have witnessed cases occurring in individuals somewhat advanced in life, in whom there was not the slightest alteration in any of the structures of the organ, the disease being purely functional, and consisting simply of morbid sensibility to light: in these cases, the function of the retina was unimpaired, vision being perfect, and none of the ordinary symptoms of amaurosis, such as muscæ, and the like, being complained of.

Persons who have a dilated and inactive pupil (mydriasis) are also, in some instances, hemeralopic, because, when too much light is admitted through the pupil, the images are confused, and vision is consequently imperfect. We are likewise informed that, in the opposite condition of the pupil (myosis), the patient often sees imperfectly in the day and better in the evening. Thus Pellier has recorded the case of a woman who had suppressed menstruation and was blind during the day, the pupils becoming so much contracted in a clear light that they almost disappeared: when the menstrual discharge returned, the disease subsided. If the contraction of the pupil be of a description to allow of dilatation taking place in a diminished light, then vision will probably be improved in the evening; but if, on the contrary, the pupil be fixed as well as contracted, as after an attack of iritis, then the patient's vision will usually be better during the day. Baron Larrey mentions the case of a person who had been confined in a subterranean dungeon for thirty-three years, and who, on being liberated, could not see, except by the light of evening.

It is probable that a defence for the eyes having a small central aperture, similar to that used by the Esquimaux; dark crape, as used by travellers over the African deserts; or staining the eyebrows, eyelids, and cilia with some dark pigment, as practised in eastern climates, might be serviceable in relieving this morbid sensibility to light. If this condition should seem to depend upon any constitutional derangement, or suppressed menstruation, our object must be to improve

the general health, and to endeavour the restoration of the impaired function. In some instances, the employment of local stimulants to the conjunctival surface may probably be of service.

Nyctalopia.

There is another affection, precisely the opposite of the former, to which the term nyctalopia is applied. These terms, nyctalopia and hemeralopia, are very frequently confounded, sometimes being considered to indicate night and day vision; but the privative *a* would seem to lead to the inference, that it is the absence rather than the presence of vision that ought to be understood by their employment, so that it would appear to be more correct to translate these terms into night-blindness and day-blindness.

When a person is nyctalopic, he can see well enough in the full light of day, but as night approaches fails to distinguish objects, and can see little or nothing in a dull light. This affection is seldom observed except in tropical climates, where the eyes are exposed to the glaring light and burning heat of a vertical sun. Sailors are most disposed to it; and it is remarkable that persons who have been but little subject to it in northern climates, are most liable to be attacked with it when they reach the tropical regions, much more so than the natives themselves. It seems, therefore, reasonable to infer, that the exposure to the intense action of the solar rays is the exciting cause of this morbid condition of the eye.

Nyctalopia is commonly supposed to depend upon a partial paralysis of the retina, existing, of course, to a very limited extent. If there be giddiness or other affection of the head accompanying, it may with equal plausibility be referred to the brain. It is quite possible that the retina, optic nerve, or, perhaps, rather the cerebral portion of the optical apparatus, may be sufficiently influenced by the images produced in the bottom of the eye, when exposed to the solar rays, and yet be insensible to those feebler images which result from the dim twilight, or even artificial light. We know that there is a vast difference in the illuminating power of the sun and that of all other luminous bodies: *e. g.*, the illuminating property of the solar as compared with the lunar rays, is stated by some authorities as 90,000, and by others as 800,000 to 1. With this vast disproportion, we need not be surprised that, under certain circumstances, the lunar rays, although sufficient to produce an image on the retina, may not be powerful enough to create such an impression on the nervous apparatus as to produce vision. Nothing, indeed, is more common than to hear persons complaining of their inability to see by candle-light, whilst by day-light their vision is unimpaired.

We are informed by travellers that the light of the moon, in eastern countries, has a very peculiar effect upon some individuals. The Rev. Vere Monro, a recent traveller in the East, says—"the influence of the moon upon my head was so powerful, that whenever its beams reached me, I was compelled to get up and move into the shade." It has also a peculiar effect upon the eyes. A captain, who had eyes of an unnatural blue, said that it was owing to his having been much exposed to the light of the moon.

What the precise condition may be upon which night-blindness depends, is at present a subject of speculation. It is a complaint that is rarely observed in this country, and hence we have seldom an opportunity of investigating either its pathology or treatment; but we are informed by Mr. Bampfield, a gentleman who saw much of it in the East, that it is an affection which is easily removed by antiphlogistic treatment. Indeed, he states that it was rarely necessary to do more than administer purgatives, and apply blisters to the temples.

Myopia.

I must now request your attention to myopia, or near-sightedness. Myopia, however, is not to be regarded as a disease of the visual organ. The construction of this organ varies somewhat in different individuals. At an early period of life, some are observed to have a difficulty in seeing objects which are situated at a distance, and if they happen accidentally to look through a concave glass, are much surprised at the improvement which they find in viewing such objects. The degree in which myopia exists in different individuals is various, some having a difficulty only with respect to objects at some distance, whilst others are unable to see the letters of a book, except when almost in contact with the eye. Persons whose eyes are myopic are commonly unable to recognise their acquaintances, or to read the names on the sign-boards, across a street of moderate dimensions.

Myopia is usually considered to depend upon some slight imperfection in some portion of the mechanism of the eye; in which portion the presumed imperfection exists is, however, not satisfactorily established. There are some circumstances which seem to favour the view that it is to the impaired function of the iris that we are to look for an explanation of the question. The existence of myopia in persons who are much employed in looking at near, minute, or brilliant objects, occupations in which the pupil is found to be much contracted, appears to favour this view. Individuals who write or read much are often similarly affected; whilst, on the other hand, sailors, soldiers, and persons who are habitually on the look-out for distant objects, are usually free from this inconvenience. There can scarcely be a doubt but that the imperfect action of so important a portion of the mechanism of the

eye, as the iris must certainly be, will, to a certain extent, impair the function of vision. Accordingly we find that in cases of contracted pupil after iritis, although there may be no loss of transparency, there is often very imperfect vision, the patient being unable properly to discern such objects as are at a distance. That the size of the pupil has a regulating influence over vision, may also be inferred from the circumstance, that if we look through a pinhole in a card at the letters of a book, we shall find them considerably magnified; and, moreover, we can see them with the eye close to the book, which we could not do without such a contrivance. Thus, also, in the case of a gentleman who, many years since, had an attack of iritis in one eye, the pupil being much contracted, I found that he can see any object much nearer to him with this than with the sound eye.

Sir David Brewster has related some experiments which go to prove that the application of a bright light to the eye, so as to cause contraction of the pupil, enables the organ to see objects much nearer it. Dr. Wells, on the other hand, found that after the pupil had been dilated by belladonna, vision of near objects became impaired. Dr. Wells also relates the case of an individual who had paralysis of the third pair of nerves with widely-dilated pupils: he could see the hour by a public clock at a distance, but could not read the letters of a book distinctly without the aid of convex glasses. Mr. Ware likewise mentions the case of a lady who, when not engaged in reading or sewing, had the pupil of one eye excessively dilated; but, if she commenced reading, the pupil of that eye immediately contracted to the size of a pin-head, the book being held exactly at the distance of nine inches. With an artificial eye, it is also demonstrable that a small pupil is much more favourable than a large one for the representation of near objects. Many near-sighted individuals see objects at a little distance, such as the pictures on a wall, better in the evening, from the expansion of the pupil which then takes place, than they are able to do in the day-time. From all this it seems reasonable to infer, that the condition of the pupil, in many instances, has something to do with the production of myopia, although there are many others in which the pupil is perfectly natural, or even considerably dilated, and yet myopia exists.

There are other conditions of the eye which, perhaps, more commonly tend to produce near-sightedness. Thus, if there be too great a convexity of the cornea, the refraction of the rays of light will be so excessive, that the image of a small object placed beyond a certain distance will be formed anterior to the retina, and consequently will be imperfectly seen. This we find to be the case, in an extreme degree, in that condition of the eye termed conical cornea, as well as in cases of enlargement or dropsy of the anterior chamber. It must be obvious, likewise, that near-sightedness will result from the crystalline humor being of too convex a form, and that the same condition will be brought about by there being too great a distance between the situation of the crystalline and that of the retina.

That myopia may be occasionally induced by some morbid condition, or some malformation of the eye, seems tolerably certain; but, generally speaking, such I apprehend is not the case. The eye is in all cases a powerfully refracting optical instrument; in some to a greater, in others to a less extent. Very slight differences, in the convexity of the organ, we know, will produce a decided variation in its refractive power; and the greater the refractive power of the eye, the better will it be adapted for viewing near objects.

Now, an organ which is best qualified for viewing near objects cannot be so well adapted for distant objects, and *vice versâ*. In every eye vision is limited to a certain extent; *e. g.*, a myopic, or powerfully-refracting eye, can only see an object, as the letters of a book, within certain limits; and in proportion as such an eye can discern the letters near to it, so will be the difficulty of distinguishing them when removed to a distance. I assume, for the purpose of illustration, that there are three degrees of refractive power which most eyes possess: the first may be called the myopic eye; the second the mediopic; and the third the presbyopic. The myopic eye, then, will be able to read letters of a certain size, at a distance varying from, say two to about sixteen inches; the mediopic eye will read the same letters at a distance varying from three to twenty-four inches; whilst a presbyopic eye will only read them from four to about thirty-two inches. I do not give this as an exact rule applicable to all cases, but in some instances which I have investigated this has been the result. Nor do I mean to say that the letters will be seen equally well at any point of the scale I have given; on the contrary, they will be most accurately seen at the medium point (the point of distinct vision), and in proportion as we recede from that point in either direction, the letters will be less perfectly seen.

Myopia, then, I think, is not generally to be considered as a disease, for every eye is perfect within its own peculiar range of vision. The myopic eye has its range, so the presbyopic; so also the mediopic, or more generally useful eye. As the last is probably the most common, it is, therefore, regarded as the standard of perfection, although it can neither see an object so far off as the presbyopic, or one so near as the myopic eye.

Intimately connected with this subject is that of the supposed adjustment of the eye to

distances. It appears to me, however, to be perfectly clear, that no eye can discern any object except within its own peculiar range; *e. g.*, no exertion can cause a mediopic eye to see the letters of a book out of the range I have mentioned; but if the letters be enlarged, then the distance at which they can be seen will be proportionably increased.

If this simple view of the question be correct, I conceive it altogether disposes of the adjustment hypothesis. Admitting that there is a *point of distinct vision*, and that as we advance to, or recede from, the object in view, vision becomes less distinct until it ceases; if the eye really possess the power of adjusting itself, why should the range of distinct vision be confined within the limits mentioned, as it is?

This is at least indisputable, that no adjustment can take place within the eye, in the case of reading the print before-mentioned, out of the limits of from three to twenty-four inches: and, in proof that the power of distinct vision within these limits is not dependent upon adjustment, we need but take the camera obscura, and hold up before it any object, and we shall have demonstrated the fact that an image, varying in the perfection of its outline, will be represented on the screen at various distances, having, like the eye, its *point of distinct vision* (if we may so say), and becoming less distinct as the object is brought nearer to, or removed farther from, the instrument.

That vision cannot be extended beyond the limits I have mentioned, is quite certain; for if I look at the letters of a book situated farther off than those limits, I am unable to see them, whilst I can readily discern all the larger objects around me. There is no adjusting power within the eye which can enable me to see the letters under these circumstances. I see the larger objects, because their size and distance accord with the construction of my eye; but the letters I do not see, from a want of such accordance. The only adjustment that can be effected here, is the lessening of the distance between the letters and the eye.

But with the camera obscura adjustment may be effected, and the letters brought into view without any alteration in their relative position; and this distinction should never be lost sight of.

The camera obscura, like the presbyopic eye, is best fitted to procure an image of an object at a distance. If its focus be changed, it will then, like the myopic eye, best represent an object near. The camera obscura can have its focus changed, as I have said, but the eye admits of no such change, it can represent nothing beyond the limits mentioned.

The fallacy of the adjustment hypothesis consists in not taking into account the size of the object as compared with the distance.

When we speak of viewing near and distant objects, and ask, how can the eye give an accurate image of both without a change in its relations? we forget that it can only do so when the size of the objects is in proportion to their distance. Thus we see a church at the distance of several miles, and a model of the same at that of a few feet.

The image on the retina will be the same in both instances, if the ratio in size and distance be maintained, and that without the agency of any adjusting power. Let this ratio be neglected, however, and the eye possesses no means of bringing the object into view—no power of adjustment.

So that when we speak of adjusting the eye from near to distant objects, we speak in reality but of a change from lesser to larger ones. What change can be needed in looking from a ball of the size of an orange, at the distance of only a few feet, to another ball situated a mile off, of a size proportionate to the distance? It is clear that, if the latter ball were not of the required size, no adjustment of the eye could render it visible.

As long, then, as there is an accordance between the size of an object and its distance, so long it will be accurately seen, regard being had to the construction of the eye, whether it be presbyopic, myopic, or mediopic; and the converse is equally true, that if this accordance be wanting, then the eye possesses no means of adjusting itself to remedy the deficiency,—to bring the object into view.

Whatever may be the correct view of these different questions, the method of obviating the inconvenience sustained by myopic individuals is purely mechanical; viz., the use of an optical contrivance, capable of diminishing the excessive refraction. This is only to be effected by the employment of a concave lens. It is to the optician, then, that we are to look for the remedy. With the assistance of concave glasses, the range of vision is altered in proportion to their degree of concavity; and whilst using them the eye is changed from a myopic to that of a mediopic, or even of a presbyopic character, the vision of remote objects being materially improved. These instruments, of course, act only upon the rays of light previously to their entering the eye; they do not affect the eye itself, consequently that organ never undergoes any change from their employment; it never becomes less myopic, however long they may be used, and, therefore, the imperfection (if such it may be termed) is never removed by their use.

It is the practice with some opticians to inform persons requiring their assistance, that they will be able gradually to leave off the use of spectacles as if it were a mere habit; whereas, if such were the case, the habit of doing without them would prevent the necessity of using them at all, which is contrary to experience; and, instead of a myopic eye becoming less near-sighted, I should rather say

that there would be a slight tendency the other way, although it might not be owing to the use of the spectacles.

As the eye is more or less myopic (and the amount is variable in different individuals), so the spectacles should be more or less concave; the concavity should not be too great, such as the individual can see comfortably with (reference being had to near as well as remote objects), being preferable to those which diminish the object too much, because they are then apt to dazzle and irritate the eyes. At first, their use is generally attended with slight headach and vertigo, so that they should not be used at too long a period at once. The same results often follow from changing spectacles, even when their power is nearly the same as those previously used.

Presbyopia.

The opposite condition to myopia is, as I have already intimated, that termed presbyopia or far-sightedness. This term is derived from two Greek words signifying *old* and *eye*, because in elderly persons far-sightedness usually exists. At this period of life, the convexity of the eye is diminished; and this is the case both with the cornea and crystalline lens. As the density of these structures is usually at the same time somewhat increased, this change has a tendency to counterbalance the effects which result from the loss of their convexity; and hence we find that many old persons possess unimpaired vision as long as they continue to exist. But, very frequently, there is so much flattening of the refractive media, that vision becomes materially impaired. When this is the case, the individual loses the power of seeing small objects, and can with difficulty read the ordinary-sized letters of a book. In the first place, he can only see them when held at a considerable distance from the eye; and as the change increases, he cannot see them under any circumstances without optical assistance. On the other hand, he is able to discern large objects at a much greater distance than other persons. This diminution of the convexity of the organ operates in this manner: the rays of light which proceed from a small or near object are not sufficiently refracted to produce an image upon the retina; and as the focal distance is at a point posterior to the nervous membrane, consequently no correct impression of the object is conveyed to the brain. Presbyopia, though most frequently met with in elderly persons, is by no means confined to them, any more than myopia is confined to the young.

It may be thought that the condition of the pupil, as it appears to do in some cases of myopia, has likewise an effect in producing presbyopia; that as a contracted pupil, in some instances, appears to contribute to near-sightedness, so an unusually-dilated pupil may have a tendency to bring on far-sightedness. To satisfy myself of the effect of dilatation of the pupil as to viewing near and distant objects, I produced an artificial dilatation of the pupil of my right eye by the application of belladonna, whilst that of the other eye remained of the natural size, which is usually rather contracted. When a book was held at four inches distance from the eye whose pupil was dilated, the letters were very indistinct, and at two inches distance were invisible; whereas to the other eye they were quite distinct at either distance. At a distance of nine inches, the dilated eye could read the letters with ease. So far it appears clear that a large pupil is unfavourable for viewing near objects. The next point, then, was to ascertain its effect on distant objects. Here the same defect was observed as with the letters; persons walking at a distance, the houses and other remote objects were all less distinct when seen through the larger than the lesser pupil. This defect was not removed, though diminished, by using concave glasses; for, on looking through these at persons and objects at a distance, the dilated eye was unable to discern many that were distinctly visible to the other. In short, objects at intermediate distances were alone accurately seen. It is quite clear, then, that presbyopia is not simply dependent on the condition of the pupil, but that it is to be referred to a diminution of the convexity of the refractive agents.

The obvious remedy for this condition of the eye is the employment of a convex glass. This produces the necessary convergence of the rays of light, which the eye is of itself unable sufficiently to effect. It is proper to employ convex glasses upon near objects only, as in reading or writing; indeed, those who use them generally look over them when viewing distant objects. As in choosing other glasses, those are to be selected through which the individual can see with the least optical aid, in other words, with the least converging power. Those which converge the least have a focal distance of about thirty-six inches; whilst those which produce the greatest effect of this kind are of six inches focus. There are many gradations between these; but it is best to begin with the highest number first. The focal distance is ascertained by holding up a piece of white paper on one side of the glass, and a lighted candle on the other. The distance at which the most perfect figure of the flame is seen upon the paper is the focal distance.

TWO CASES OF

CONVULSIONS WITH ANASARCA, AFTER SCARLATINA IN CHILDREN;

Being the first of a Series of Illustrations of the Diseases of the Nervous System.

By Charles Simpson, Surgeon, Stamford.

James Close, ætat. nine years, and his brother Henry, ætat. eleven, were attacked with scarlet fever, for which they had no medical advice, the disease being so slight that their mother was content with the administration of purgative medicines. They were kept in the house but a few days, and very shortly after went to school. They were cheerful, and not at all debilitated. In about three weeks the general surface became œdematous; but this was attended with such slight derangement of general health in spirits or strength, that their parents took no seriôus notice of it, until after some further time the scrotum also beginning to swell, and becoming painful, alarm was excited, and I was sent for to attend them.

On my arrival, I discovered they were labouring under general anasarca, following scarlet fever. I examined carefully whether there was any local congestion. None appeared to exist. The functions of the brain and lungs were healthy and unimpaired; the mind serene; the head free from pain; no intolerance of light or sound; the respiration was equable and quiet; the circulation, though slightly accelerated, was neither full nor feeble. I treated the little patients with active purgatives of the hydragogue kind. I watched them carefully every day. In the evening of the fourth day, however, about six weeks after the eruption of the fever, a train of alarming symptoms suddenly arose: convulsions came on. The parents, however, were not so much alarmed as to deem it necessary to send for me, a distance of four miles, that evening. The grandmother had seen convulsions arise in children from trivial causes, as worms, or disordered bowels, and she thought herself, and persuaded others, to hope that it might be the case here. The absence of all premonitory symptoms tended to this comfortable belief of the friends. The symptoms, however, increasing in severity and frequency during the night, I was summoned early the next morning to attend them. On my arrival, the consternation and apprehension of all around, together with my own surprise, added, if anything could add, to the difficulty of the cases which the following faithful narration presents: nothing more frightful or alarming could be witnessed.

James, the younger brother, presented the following symptoms:—Coma and convulsions in their most marked and violent forms; there was complete suspension of consciousness, consequently of volition and sensation; the breathing was laborious, stertorous, and rattling, forcing at each expiration frothy mucus through the nostrils and clenched teeth; the eyelids were wide open; strabismus frightful; the pupil of the right eye directed upwards and outwards, that of the left following its direction upwards and inwards; the thumb was forcibly contracted, over and down upon the palm of the hand, and the fingers firmly clasping it in this position; the whole muscular system was rigid, agitated, and trembling; the head was drawn to one side; the legs and arms forcibly extended; sometimes the whole body was drawn to one side, and sometimes it was forcibly and terribly bent back.

Henry, the elder brother, was similarly affected. The peculiar position of the thumb and fingers was here noticed. The strabismus was present; also the general convulsions and rigidity of the muscular system: there was also coma. The symptoms, however, were altogether less violent, and the convulsions came on at intervals; while in the younger they were more violent, and never ceasing.

It will be admitted that these circumstances required the greatest promptitude and decision in the treatment. Blood-letting was the only means of relief that presented itself to my mind, yet there appeared some objections to it. The very fever they had undergone, demanded that depletion of any kind should be had recourse to with the utmost caution. The countenance of each patient, too, was remarkably pale; and this perplexing symptom was rendered still more so by the anasarcous deposit. It was quite impossible to ascertain either the force or frequency of the pulse with accuracy, the general convulsions and agitation of the frame presenting an insuperable obstacle: and could, indeed, the greater rapidity of the pulse have been ascertained, it might then have been fairly attributed to the violent muscular action present. In defiance of all these perplexing circumstances, blood-letting seemed to be demanded. Could it be accomplished without danger? Is there any admitted principle on which to execute this powerful remedial agent with safety? To Dr. Marshall Hall the profession is indebted for such a principle; and these two cases afford the most striking proofs of its soundness and utility. Indeed, there is no other plan on which blood-letting could in these cases have been carried to such extent with confidence and firmness: two qualities difficult, yet how essential to preserve in such perplexing circumstances. They were both taken in convulsions about the same time. The symptoms of the younger were more violent than those of the elder; yet he had not been more robust in health, and, therefore, it could not have been anticipated

that he would bear a greater loss of blood. It might fairly have been conjectured, that at least the same amount of depletion would be equally effective. I make these observations to show, that had they had any weight at all in the execution of this powerful remedial agent, it must have signally failed. Then on what plan was it to be carried out? The answer will be anticipated from what I have already said; its importance will be best seen from what I shall now adduce.

I commenced my treatment with the elder by taking him out of bed, in a state of coma and convulsion, placing and holding him in an upright position by the aid of two attendants. I opened a vein in the arm; and after having extracted about six ounces of blood, the lips beginning to grow pale, I replaced him in bed, with consciousness completely returned, and the convulsions having entirely ceased. Treatment more effective or more flattering than this could not have been anticipated or desired. After this I could not go to my other little patient, the younger and the worse, but with confidence. Nor could I divest my mind of its flattering conjecture, that the same remedy, to the same extent, might be productive of the same happy results. Yet in spite of this, I resolved to determine the extent to which the remedy should be carried, solely by the effect which it should produce on the constitution and the disease by a change of colour in the lips, and an amelioration of the symptoms. On no other ground, together with the safety which the upright position of the patient inspires, would the remedy have been carried by any hand with confidence devoid of temerity, to the extent to which it was so happily carried in this instance. I took my little patient out of bed, and, on account of the violence of the convulsions, with great difficulty got him held in the erect posture. I made a free opening in a vein of the arm. When the blood had flowed to the extent observed in his elder brother, I became anxious that no effect was apparent. The loss of every drachm of blood afterwards increased this anxiety; but my faith in the mode of applying this powerful remedy remained unshaken, and I persevered. That I might not be mistaken, however, in this momentous circumstance, I desired an intelligent bystander to watch with me the colour of the lips. Not till more than eleven ounces of blood had flowed, was there an indication shown of the effect of the remedy on the powers of the constitution, or the violence of the disease. It was acted on with avidity. The little patient was put to bed, and for half an hour did I unceasingly watch the further effect of the means I had employed. I did not leave his bedside for an instant of this time. Different from the other case, consciousness had not returned, and the convulsions had not entirely ceased. There were other favourable symptoms, however, during and following the flow of blood, which it was extremely interesting and gratifying to witness. Such were these. The eyelids that had been so wide open, closed, and that so tightly, as not to be mistaken for the drooping from exhaustion: a favourable symptom, showing that an organ more important to life, even than that presiding over consciousness and volition, was about being relieved from its abnormal condition. The progress of this improvement was further indicated by the altered state of the respiratory function; the breathing becoming less stertorous, less laborious. I opened the eyelid—the strabismus had disappeared—and I found the pupil (before insensible) now susceptible to its natural stimulus, the light. I more than once unclasped the fingers and thumbs, and found, at last, that the contraction was not resumed to its former extent or rigidity. The improvement was progressive, and having remained with them all day, I left them in the evening with a most happy confidence. I may mention that during the day I applied eight leeches to the temples of the elder brother. On my visit next day, I was greeted with a smile from each. Science and humanity could not receive a more rich reward!

The greater tolerance of the remedy in the younger boy could only be attributed to the greater violence of the disease. The blood, too, drawn from him was both cupped and buffed, appearances not present in that of the elder. The after-treatment of these cases, in which I was joined by an intelligent and active physician, need not, I think, be related. Blood-letting was decidedly *the* remedy. The circumstances, mode, extent, and success of its exhibition, I have endeavoured to show in a clear, faithful, and unvarnished tale, hoping that it may not be without utility. One other very interesting fact may be noticed, that neither of the patients suffered from the loss of blood.

A

DISCOURSE ON MNEMONICS:

THE NATURE AND ADVANTAGES OF THE STUDY IN SIMPLIFYING THE

CLASSIFICATION, PREVENTION,

AND

TREATMENT OF INSANITY.

By WILLIAM MACDONALD, M.A., M.D., Glasgow, Lecturer on the Institutes of Medicine, in the Portland-street Medical School.

[Read before the Students, Feb. 10, 1840.]

WHATEVER relates to the mind is of importance in medicine, and few subjects of science are of more particular concern than that of the human memory; for no person, or class of persons, can expect to live long

without suffering from some one of the various diseases which affect the organ of this faculty; together with those of sensation and judgment, constituting diseased conceptions, producing disagreeable sounds to the ear, and disagreeable ideas to the mind. A discourse of this nature, therefore, should be interesting to us all, both in a moral and medical point of view, and no illustrations will be necessary, in order to prove its claims on our attention.

Mnemonics, from *μνημονικη*, means the act of memory; and authors define the memory as the power of retaining or recollecting things past. In its largest sense, it involves an inquiry into the nature of the organ of this faculty, which is the storehouse of our ideas; and which has been well compared to those repositories in animals that are filled with stores of food, on which they may ruminate, when their present pasture fails. For the purposes of the present treatise, we shall assume, without undertaking to prove, that the brain is the organ of the mind; that the mind is immaterial and immortal; that every infant has a small and undeveloped brain, together with a weak mind; that every aged person has a feeble mind, together with an enfeebled brain; that every idiot and cretan has a defective brain; that the various states of coma and delirium, produced by alcohol, opium, and other substances, arise out of a disordered action which these substances produce in the brain; that the constant aberrations of mind evinced by mad persons are always caused by irregular determinations of blood in the structure of the brain; that these irregular determinations of blood in the brain constitute functional or organic disease of that organ; that there exists a correspondence between the various maniacal symptoms and the functional and organic changes which produce them: in short, that the various degrees and stages of madness ought only to be employed, as representing degrees and stages respectively of acute or chronic inflammation of the brain. We shall assume these propositions, not because they are not susceptible of complete proof, but because not being intended to be discussed in this place, they, nevertheless, form the basis of the following remarks.

The history of thought exhibits a representation of the gradual development of the human mind, soul, or intelligence, and is consequently an exalted science. Hence, from the earliest era of philosophy, the nature of the mental faculties have furnished questions of difficult investigation, and materials of keen and important controversy. This circumstance, therefore, cannot excite surprise, from a variety of causes presenting great difficulties.

One chief difficulty which has hitherto attended this subject is, that the very act of thinking, by which we arrive at our results concerning the nature of the mind, is an act of the mind itself; and can a single function show the nature of the power from which it proceeds? Difficult as this seems to be, the human intelligence has always drawn a picture of itself, and ascribed properties to it which distinguish it from everything that is divisible and transitory.

Another difficulty is, the abstruse and metaphysical aspect which this subject has hitherto assumed: formerly, we read books and heard lectures on mental science, and we invariably arose from our studies rather dissatisfied, both on account of the vague and conjectural nature of the doctrines taught, and on account of the mind being viewed in the abstract. We had thus no hold of it; consequently, we were deceived in our expectations of real improvement and instruction. We now, happily, derive more pleasure and profit from our researches into the truths of practical metaphysics, because that science is now considered always in connection with individual faculties; and individual faculties as connected with individual organs; and individual organs affording undeniable proofs of design. We are now enabled to explain away the aggregate of the difficulties which beset us in studying mental science: we are enabled to reconcile the different species of philosophy, because one part of the brain can be distinctly pointed out as the seat of the human memory, or the storehouse of our ideas; because other parts of the brain can be distinctly pointed out respectively as the seat of sensation and judgment; and because many, if not the whole, of the complex operations of the intellect, whether they be urged by the ancients or moderns, can be resolved into the faculties of sensation, memory, and judgment, variously modified and combined: yet our *à priori* conceptions of the absolute and the infinite, seem to be referrible to a higher origin, which we have no means of ascertaining. In this discourse, we avoid as much as possible whatever is hypothetical or doubtful; and upon this principle we conceive it improper to offer, on the nature and seat of these *à priori* conceptions, any farther remark, than those which can be obtained from their history and connection with the brain and the nervous system.

It is important to recollect, that the nervous system is composed of two structures; the granular or grey, and the fibrous or white; the former is pulpy, and seems to be more vascular than the latter, and presents a soft, granulated structure, with which is mingled a number of minute corpuscles, which are strung in filaments, like beads, and which, after the period of fœtal life, become distinctly fibrous in the neighbourhood of the white or medullary substance only. Whereas this white or medullary substance of the brain is not granular, but consists wholly of tubes, assuming the form of bands,

cords, and filaments; which are also composed of still finer fibres, and which have a similar arrangement to plexuses: and all these fibres, even to the finest that can be seen by the aid of microscopes, seem to be sustained and clothed by a very delicate membrane; and all the filaments seem to be filled with a transparent, colourless fluid. It is also important to recollect, the great difference which obtains in the structure and peculiar arrangement of the white and grey nervous matter, as seen in the brain and spinal cord; because this difference seems to indicate, that they perform different functions. When the physiologist is, therefore, engaged in the difficult task of discovering the office of any particular apparatus in the organisation of an animal, there are few proofs which are so clear and satisfactory as those derived from some decided peculiarity of structure: as a simple instance, we may cite the tubular form of arteries and veins, convincing us that they are intended to carry fluids; and the valves in the interior proving to us that these fluids could only flow in one direction. Again, in our investigations into the functions of the brain, as distinguished from other structures of the body, it is true that we shall not be able to derive from the study of its structure, proofs of its functions so clear and decided, as those just cited in reference to the circulatory system. Yet we firmly believe, by availing ourselves of the evidences of mnemonics, and the exercise of the faculties afforded both by the experiments of authors and the phenomena of disease, or what is termed the argument *à posteriori*, we shall be enabled to ascertain, with some degree of certainty, the broad line of functional distinction inherent in the grey and white matter of the brain.

Accordingly, the experiments which Flourens performed on living animals are interesting, and bear in some respects on this point. Baron Cuvier, Berthollet, Portal, Pinel, and Dumeril, were present at these experiments; and their united testimony goes to prove that the cerebral lobes, or hemispheres, are the organic parts in which the impressions made on the various senses become perceptible to the mind; they farther affirm, that it is probably there, too, that all the sensations assume a distinct form and leave durable impressions, that the cerebral hemispheres are the abode of memory; and from this circumstance, therefore, they become a source to the animal of the materials of knowledge. These opinions are entertained by many physiologists, and they are daily gaining ground; besides, it is believed that the grey matter of the brain is the seat of nervous power: while the office of the medullary fibres is to act as conductors, conveying to the cineritious or grey matter, the influence of impressions communicated to these fibres, and conducting outwards, from the grey substance, the mental and motive influences to distant organs; that the spinal cord is appropriated for sensation and motion: in other words, that the cord is a centre, from which, in terms of the will, the power of motion emanates, independently of the great cerebral ganglia with which its upper extremity is connected; that the office of the corpora olivaria, or pneumogastric ganglia, is to preside over the actions of the respiratory muscles; that the sensations received by the auditory, the olfactory nerves, &c., make impressions on the respective ganglia in which they terminate, even in the posterior pyramidal bodies of the medulla oblongata, &c.; that the cerebellum is one of the centres which influence and generate the power of motion, and which preside over the functions of the voluntary muscles; that the office of that cineritious substance, or commissure, called the pons Varolii, is to establish a communication between the different parts of the cerebellum, and is perhaps more than a mere conductor—nay, that it is a generator of the power of motion; that the commissures, in fact, exercise the office of conductors of the power of motion, and at the same time are the media of establishing a complete communication between one portion of the encephalic mass and another; that the various sensations received by the extremities of the nerves make impressions, or traces of remembrance, on the inner surface of the grey matter of the great cerebral ganglia, or hemispheres; that these impressions are classified in that structure, even on the basis of the association of our ideas; that the inner surface or portion of the grey matter of the hemispheres is the seat of the memory, and that the outer surface or portion of the said grey matter of the hemispheres is the seat of the judgment, even that faculty which perceives differences in the qualities of each impression before a conception of the object is formed.

The farther researches of philosophers have also confirmed the belief, that in the animal kingdom generally a correspondence is observed between the cortical substance as to its quantity, and the sagacity of the animal; that at the birth of the human fœtus the cortical substance of the brain is almost entirely wanting; that it is so very defective, that it is only slightly marked out by slight superficial fissures, and almost confined to the surface of the brain: in other words, the distinction of the grey and white matter of the brain is never distinct, either during fœtal life or at birth; yet, as the grey matter increases in quantity, the intelligence or the faculties become developed.

Again, numerous experiments have enabled us to believe that in every case where Rolando's experiments were instituted, the animals become more dull and stupid in proportion to the quantity of cortical substance removed from the brain; and numerous cases have enabled us to affirm, that the mental faculties are those among the first affected in

every individual where the structural alteration has been found to commence at the circumference of the brain, and from thence to proceed towards the centre: whereas in those diseases in which the lesion commences at the base of the brain, and proceeds towards the circumference, the mental faculties are affected last. Thus it is obvious, by the united testimony of all, that the grey matter of the brain is the seat of the faculties. Let us now inquire if we are able, by pathological data, to make farther distinctions with differences in the functions of the grey matter of the great cerebral ganglia.

Necroscopic researches have enabled us to determine that in cases where there is partial or total loss of sensation and motion, we invariably find the following phenomena; viz., encephalitis, or inflammation of the medullary substance of the brain and cord, together with suppuration, ulceration, erosion, induration, hæmorrhagy, ramollissement, flaccidity, as well as diminished consistence of the white matter of the brain or of the cord; whereas in cases where obvious loss of memory only exists, we invariably find the pathological cause of the disease to be situated in the inner portion or surface of the grey matter which is external to the great cerebral ganglia, and above the corpora quadragemina; even in that part of the grey matter which is in immediate contact with the white medullary substance, and the phenomenon which presents itself there, is either partial or total destruction or absorption of the said grey matter, just in relation to the degree of the loss of the faculty of memory, even until the grey matter assumes the appearance it has in the heads of children, in whom it is almost entirely absent, or rather in whom there is little or no distinction between the white and the grey matters of the cerebral ganglia. Again, when loss of memory exists in connection with childish imbecility, silliness, or harmless folly, we find capillary injection partly acute, partly chronic, producing a reddish colour, more or less deep, of the grey matter, which is in immediate contact with the white medullary matter, thus constituting distinct laminæ or layers of inflammatory grey matter; while that portion of the grey matter which is external seems to be free from any lesion. Again, hardening, that slow organic process which succeeds inflammation, is present, in the same circumstances and in the same portions of the grey matter. Farther, in cases where there is obviously a false action of the judgment, we find that the acute or chronic inflammation of the grey matter has extended from the internal even to the external side of the cineritious substance, and even to the arachnoid membrane, which is thus made to adhere to the said grey matter; so much so, that, in removing that membrane, the said cortical matter comes away with it in pieces. When persons become suddenly insane, and suddenly form diseased conceptions, we invariably ascertain the presence of tumours pressing on the brain; the nature of these tumours may be adipose, bony, fleshy, cartilaginous, tubercular, or encysted; indeed, by the laws of nature, inflammation of the brain and delirium are produced by pressure on the brain. Now, when the inflammatory diathesis is present, its effects are uniformly propagated throughout the whole brain. Thus, we should well understand the great influence of local disease on the whole constitution, as well as the origin of local disease, from constitutional disturbance In this way pressure of the brain produces disturbed action of the seats of sensation, memory, and of judgment, and, consequently, diseased conceptions, or delirium. Indeed, my experience for the last sixteen years has enabled me to confirm these facts and opinions relative to the operations of the human mind, and relative to its organ, the grey or cineritious and white matter of the brain.

Now, the circumstance of there being either little or no grey matter in the great cerebral ganglia of a newly-born child, or, in other words, that there is little or no distinction between the grey and white matters of the brain at birth, and that the grey matter afterwards becomes distinct from the white, and also greatly increased in thickness and consistence by the exercise of the faculties, led me to believe that John Locke's opinions relative to the mind were partly correct; indeed, his opinions on this important subject are almost the same as my own, especially when grafted on the eclectic system of the late Professor Mylne, of Glasgow, and also on the present position of the locality of the faculties of sensation, memory, and judgment.

At the time that Locke began the study of the human mind, he went neither to ancient or modern philosophers for advice, but rather turned within himself, and after having long contemplated his own mind, he gave his reflections to the world. He rejects innate ideas, and considers that the understanding attains the knowledge of itself through experience and observation; in other words, that the mind comes along with the child into this world without ideas. He compares the mind, at this period, to a tabula rasa, or sheet of white paper, without impressions (obviously what is now found to be the almost indistinct grey matter found on the great cerebral ganglia at birth). Locke also early taught that sensation and reflection are the sources of knowledge (obviously what is now found to be the distinct and well-developed appearance produced at maturity by the exercise of the faculties). Again, he believed, what a modern class of philosophers avow, that the faculty of memory was not tenable, because its exercise was necessarily involved in the exercise of reflection.

Professor Mylne went a step further, and reduced our intellectual faculties to three,

viz., sensation, memory, and judgment: he showed that many of the most complex operations of the intellect may be resolved into these elements, variously modified and combined. He regarded our perceptions of an external world as acquired rather than intuitive: the leaning which he had to the views of Locke, did not lead him into those extravagances which others have endeavoured to graft on them, for while he strenuously maintained that our knowledge of external nature comes through the hard and horny gate of sense, he did not prosecute the vain attempt to trace all our loftiest thoughts, or our *à priori* conceptions of the absolute and the infinite, of the fair, the true, and the good, to the same humble inlet, but seemed rather willing to acknowledge that the mind of man has thoughts which assert a higher origin, and that there is within us a living function of conceptions, or perceptions, which the plummet of sense cannot fathom: in like manner his sympathy with some of the opinions of Hobbes and others, did not lead him to refer all human conduct to self-love as its ultimate and humble spring; but he warmly maintained the benevolent and disinterested nature of our social affections. In short, his philosophy may be characterised as eclectic; for instead of surrendering to the exclusive influence of any leading tenet, he rather liked to cull from the various systems what seemed to be either, true or good. Next to the opinion that our perceptions of external nature are acquired rather than intuitive, he maintained that a connection existed between our powers of knowledge and our principles of action (and the organs of this connection are the commissures). He laboured to break down the partition which philosophers have set up between the powers of the understanding and the powers of the will (we have seen, also, that the commissures are really the organs which afford a complete communication between the external and internal grey matter of the brain respectively, the seat of the animal and organic life referred to by Bichat, and of the understanding and the will of metaphysicians). In short, Professor Mylne laboured to show that many of the principles of action which have been called mechanical and instinctive, do yet admit of being considered as in some sense rational; and he wisely came to the conclusion, that our feelings, affections, and passions, even the most sudden, fantastic, and lawless, do yet proceed upon a judgment passed in the intellect. Finally, he urged the important truth, that reason or judgment is the dominant faculty of man; and we have endeavoured to prove that his opinions are correct.

The phrenologists, a modern class of philosophers, have gone a step farther than Mylne, and his predecessor, they have endeavoured to show that they have discovered the seats of thirty-five faculties, which, when added to the five senses, amount to forty faculties. This list of faculties they do not, however, give as complete, although they have already allocated the whole brain to the faculties they have already discovered. The first nine of these faculties, according to phrenology, are called propensities: now, if we analyse any one of these, we shall come to the conclusion, that no propensity can be exercised without the aid of the three faculties of sensation, memory, and judgment. The same remark applies to the twelve faculties or sentiments of phrenology; and as to the fourteen knowing faculties of phrenology, which perceive the existence, qualities, and relations of external objects, or otherwise compare, judge, discriminate, or rather perceive differences, now, what are these fourteen faculties? but fourteen different modifications of the faculty of judgment, in the exercise of which we must have either a direct or reflex act of the other faculties of sensation and memory, before a judgment of the mind is effected. Thus, the first sensation the child has produces an act of memory only; whereas the second sensation not only produces memory, but also a judgment, viz., whether it be the same sensation, or a different one: really in this way judgment is nothing else but the power of discerning the relations between one term, or between one proposition and another, or, otherwise, it is merely the perception of differences.

Farther, these philosophers exclude memory from the list of their thirty-five faculties; yet they affirm that, in the exercise of each of these, memory necessarily enters. They urge that it is a metaphysical error to distinguish memory as a primitive faculty, seeing that the cognising and reasoning powers must be the remembering ones. They also urge, that if memory were a distinctive power, it would be alike strong in each individual, and would regard all subjects of recollection alike: they say that the doctrine of the existence of memory also is inconsistent with fact, since one individual remembers objects and another forgets them, yet remembers events; while a third recalls with ease a train of reasoning; another, musical airs; and another, the faces of persons he has seen, or the scenes he has surveyed: while each of the individuals referred to may imperfectly remember some other quality relative to the subjects now mentioned. These philosophers, therefore, say, that they are forced to the conclusion, that there is no general faculty called the memory, or that power which recalls impressions; and hence they assume that each of these thirty-five faculties has in itself the active action of memory, together with that of sensation and judgment, whenever the faculty is engaged in any subject of research. So they speak of general sensation, which is continuous with all the faculties, and of particular sensation in relation to an individual faculty; and the same epithets apply alike to memory and judgment, since each faculty is in juxta-position with another. Thus they

look on the mind as a perfect whole; and on the same analogy, they conceive that the brain, as the organ of the mind, should be unique, and whole also; and that the powers and faculties of the mind are rather different acts, different states, or different modifications, of the intellect. Lord Bacon also affirms, that there is nothing improbable, nor in the smallest degree at variance with true philosophy, in the supposition, that the brain furnishes the conditions necessary to the manifestation of all the mental phenomena; so any one portion of the said organ of the mind may furnish the conditions necessary to the manifestation of any one part of these phenomena. According to him, therefore, it is obviously possible that the different portions of the brain may be appropriated to the exercise of the faculties on particular subjects, rather than to the differences among the acts of thought themselves, as have chiefly attracted the attention of metaphysicians, and yet be unique and uniform. But it has been our object to show that every complex operation of thought may be resolved into the simple exercise of sensation, memory, and judgment, variously modified and combined; and that the direct or reflex acts of the memory are connected with the grey matter of the cerebral hemispheres: that this grey matter can be increased and improved by the exercise of the faculties; that the same analogy holds good in regard to every other structure of the body (*e. g.*), witness the difference which exists between the arm of a delicate lady and that of a brawny smith who daily uses it. In truth, the grey cerebral matter is increased by the exercise of the faculties admitted by metaphysics as well as by phrenology; and we have already shown that each of these can be resolved into the same elements.

Let us now proceed to illustrate the correctness of these doctrines, in a practical manner. The mode which we shall pursue will probably be thought singular, we trust it will be useful. The metaphysical arguments which are customarily employed, in order to establish the current opinions entertained of mental diseases, are, if we mistake not, less satisfactory to the minds of professional men, than the authors of them appear to apprehend. Such arguments should have truth for their basis, should be founded on known and ascertained data, before they can be acceptable to medical practitioners. Thus, practical arguments are attended with a superior power of conviction, and commonly leave little doubt behind them. On such grounds as these we shall, at the present time, rely for the accomplishment of our design, of simplifying the classification, prevention, and treatment of mental diseases.

When first I turned my thoughts to speculations on mental diseases, an air of mystery seemed to hang over the whole subject; which arose, I believe, from this circumstance, that along with others I supposed that the subject was of a conjectural nature, and otherwise, that it was impossible to be explained in connection with physical phenomena. We are now, happily, better acquainted with the nature of our minds and our bodies, and that, too, by observing the qualities of both. There are now means of knowing many of the properties of each of their elements, of which our predecessors had no knowledge. Indeed, we cannot determine more certainly that a stone is hard, than that our minds are capable of feeling, remembering, and judging; and that one part of the brain can be distinctly pointed out as the seat of these faculties. We can now investigate mental diseases, on the supposition that there is a fixed and established order, in the events which take place, in physical and mental science; as we feel assured that when preceding phenomena are the same, that the subsequent results will be the same also. Thus the mind is subjected to the ordeal of experiment; and thus the true road to knowledge seems to be, that of observation, experience, hypothesis, analogy, together with experiment.

The proper method of conducting this inquiry, will be to examine numerous cases of mental diseases in various hospitals. Accordingly, when a person of correct observation goes to such establishments, where idiots, fools and madmen of various descriptions are assembled, with the view of noting the principal varieties of their disorders, and endeavours for that purpose to enter into conversation with the inmates, the most essential distinctions that he will remark in the phenomena presented to him, will be the following; viz., some of these individuals appear incapable of conversing, or of moving and acting like sane persons; their powers of articulation are so defective, that in many cases they may be said rather to howl or cry; their limbs are wasted, paralysed, or ill-formed; their senses are dull, in consequence of a complete or partial hebetude of the faculty of sensation: this state obviously produces an impairment of the other faculties of memory and judgment, because none of their faculties can be developed, unless the organ of sensation be in a healthy state. Congenital idiocy, therefore, is chiefly a defect of the faculty of sensation, arising from a malformation of the cranium, or from a deficient development both of the medullary and cineritious substance of the great cerebral ganglia, as well as of the medulla oblongata and medulla spinalis, the great seats and centres of the faculties and of the power of motion. Acquired idiocy presents the same phenomena, and often proceeds from mechanical injury of the cranium, or from injury or disease of the great cerebral ganglia; as encephalitis, or inflammation of the medullary substance of the brain and spinal cord, together with suppuration, ulceration, erosion, induration, hæmorrhage, ramollissement, flaccidity, as well

as diminished consistence of the white matter of the brain or cord. Again, excess in sensual indulgences, intemperance, excessive fatigue, together with perverted moral causes, produce acquired idiocy, in which life is commonly of short duration. It would seem, therefore, that all the diseases presenting, idiocy and fatuity involve a complete or partial dulness of the faculty of sensation, in consequence, originally, of acute or chronic inflammation seizing the organs of sensation. In congenital cases of idiocy, the inflammatory action seizes the organs of sensation before birth, arrests the process of nutrition, and consequently produces a defective organisation of the brain: whereas in acquired idiocy, the phenomena of inflammation of the white matter of the brain present themselves after birth. On the whole, I have been led to think that all cases of similar diseases should be comprehended in the class aisthesitis (*αισθησιτις* from *αισθησις*, instrumentum sentiendi), imperfection of the faculty of sensation, or inflammation of the medullary substance of the brain and cord, which are the organs of sensation. Indeed, we have the high authority of Cullen for the analogy of this and the subsequent classification. This celebrated author has the class of diseases phrenitis (*φρενιτις* from *φρην*, the mind), for phrensy or inflammation of the brain.

Other individuals, and perhaps an equal number, will be found, in such hospitals, who exhibit a complete or partial hebetude of the faculty of memory, and particularly a perversion of that faculty, as evinced in their exercise of the association of ideas, thus producing confusion of thought and childishness. Persons are reduced to this state, in consequence of acute or chronic inflammation seizing the internal portion of the grey matter of the great cerebral hemispheres or ganglia. In such cases, external objects make too weak an impression on the seat of the memory. Their sensations become inefficient, because their impressions are feeble, obscure, and incomplete. These patients cannot form correct ideas or conceptions of objects; neither can they compare, associate, or abstract these imperfect ideas, in consequence of the perverted nature of the seat of memory, by inflammation. This state of disease, denominated silliness or harmless folly, is often merely an attendant on other diseases, or other forms of mental disorders, and it is sometimes temporary, though it often becomes permanent. From these facts, I have been led to believe that all similar cases of harmless folly should be comprehended in the class mnemitis (*μνημιτις* from *μνημη*, memoriæ instrumentum), partial or total loss of the memory, or a perverse exercise of that faculty, from inflammation of that portion of the grey matter of the brain which is the seat of the faculty of memory.

Many patients in these places of refuge are subject to occasional periods of unusual excitement; when their passions are roused, they not only become boisterous and violent, but are stimulated by a blind impulse to acts of fury. Their false or perverted judgments are agitated by a variety of illusions, which fill them with anxiety and terror, or with anger and rage; they are the raving madmen or maniacs of authors. Adults seem to be the principal subjects of this disease: a nervous temperament and an irritable constitution predispose to it. Females are more predisposed to it than males, particularly at the period when menstruation begins, or ceases; during pregnancy, and after delivery; but when the excitement ceases, and some degree of tranquillity is restored, the patients return to the state of calm incoherence: in this state they are incapable of reasoning, and often of expressing a single proposition; their judgments are confused and incoherent; their ideas do not follow each other according to the usual laws of association; their sentences are broken by the intrusion of false judgments, which crowd upon the mind, and thus render it hurried or confused; their eyes assume a wild aspect;* their conduct displays a want of any distinct purpose or intention. Insane patients of this class are said to labour under general or universal madness, while the period of violence or excitement lasts; in the latter period of the disease they are more composed, yet they judge falsely, and at last a total obliteration of the faculties take place: thus there are degrees of madness as of folly; and as they are intimately connected, so the disorderly jumbling of ideas together is more obvious in some persons than others. Inflammation of the outer surface of the grey matter of the cerebral hemispheres constitutes this order of madness.

Again, maniacs of another order labour under particular or partial madness, termed by some authors monomania. Thus the maniacs whose thoughts or judgments are partly coherent, or sound, and who are capable of expressing themselves in a connected and intelligible manner on some subjects, display great differences in the degree in which they exercise false judgment, from patients who are wholly incoherent. The most striking phenomena of their condition, are not so much displayed in their words as in their conduct; their actions, their gestures, their whole manner of existence is singular, and different from that of other persons. On conversing with these individuals, it is discovered that some of them labour under a false judgment as to their personal identity, or some other circumstance connected with their state or relations; and they are accordingly insane, in reference to a particular idea or a particular train of judgments of the mind; while their notions or ideas in relation to other

* See LANCET, vol. ii., 1837-8, p. 330.

subjects are perfectly correct. Again, other individuals of the order above described, betray no general symptom of mania, except that their habits and manners are rather singular and eccentric; their principal disorder seems to be a perverted state of reason, evinced by the exercise of false judgment on moral subjects. Persons affected in this way, are said by some late writers to labour under moral insanity.

Madmen of another order are also found in such institutions whose disorder is of an appalling kind. These individuals are apparently sane during the greater part of their lives; yet they are subject to occasional impulses, which drive them to commit or attempt horrible acts (such as arson, homicide, self-murder, or other deeds of violence, and occasionally of sensual or unnatural depravity), and to display hatred towards the most natural objects of love. The extreme punishments of the law, together with the gibbet and the gallows, have been the destiny of many of these individuals, who should have been sent only to solitary confinement. Unmerited punishments of this kind, however, do not take place so frequently as formerly, because medical men have been the humble means of giving judges and juries a different view of this species of madness. It cannot excite surprise, that we purpose to classify the disorder under the head of perverse or false judgment: and this disorder too always depends on inflammation of the outer surface of the grey matter of the cerebral ganglia.

Finally, many patients may be remarked in such hospitals, whose disorder would be called by late writers melancholia. The complaint bears the constant aspect of sorrow, or a dejection or depression of spirits. Some dark or mournful idea or conception exclusively occupies the mind, so that by degrees the judgment becomes unable to perceive differences in objects; the power of self-control is either impaired or entirely lost; a settled gloom, consequently, takes possession of the mind: consciousness, however, may still continue, and the patients may know their state. But if consciousness be also lost, and this state becomes permanent, the patients are insensible to the world around them, they only live within themselves, and there too, in the circle of a conception or idea perverted, in its whole nature. In this disordered state of the judgment, the other faculties may still continue to act, although the mode and result of their operation may possibly be influenced in time by the existing disease: such is the mutual and involuntary action of the mind on the body, and *vice versâ*, that a disordered state of the one is inconsistent with the well-being of the other.

There may yet be reflection in the actions of melancholic patients, but it is of an erroneous kind: for they sometimes fancy themselves damned; hated of all mankind; accused justly or unjustly of flagitious crimes. Now, all the cases before-mentioned labour under the influence of false judgment, arising from an acute or chronic inflammation of the outer or external surface of the grey matter of the great cerebral ganglia, or hemispheres. I have been led to suggest accordingly, that all the afore-mentioned illustrations of insanity, viz., the raving madness, mania, monomania, moral insanity, insane impulse, and the melancholia of late authors, should be comprehended in the class krisitis (κρισιτις, from κρισις, judicium); the diseases of false judgment, or inflammation of that portion of the grey matter of the brain which is the organ of the faculty of judgment.

The prevention of mental diseases, I would humbly suggest, is of paramount importance; and I would beg leave to say, when any symptoms of such diseases appear, it is very desirable to remove the patients from those localities which are calculated to excite and foster their morbid feelings, and especially to surround them with circumstances, of which the tendency is to withdraw their attention from their diseased emotions and conceptions, and induce a return to natural and healthy habits of mind: I believe nothing tends so much to aid our object of preventing insanity, when it appears, than solitary confinement and hard exercise in airy apartments which are perfectly darkened. Thus the senses and faculties will be sparingly exercised, and that with a view to prevent the ingress of any new diseased sensation or conception from the contemplation of external objects. Farther, when every degree of excitement is checked by the usual remedies, I also believe, from experience, that the plentiful use, internally, of iodine, along with bitter infusions, or tinctures, and conjoined with the external use of the hydriodate of potash ointment over the whole scalp, will assuredly cause the absorption of the grey matter of the cerebral hemispheres, in which the faculties of memory and judgment seem to be located. When such diseases are thus removed, the grey matter of the hemispheres is absorbed. Thus the judgment and memory are gone, as their organ is destroyed. Patients in this way are reduced to the condition of childhood, and they require to be taught (*de novo*) as if they were really children; yet by careful tuition they regain the use of their faculties, when the cineritious substance of the hemispheres is again developed.

The treatment of mental diseases, like every other disease, should be conducted on general principles; and notwithstanding the objections of Pinel, Esquirol, and others, to the use of the lancet, still venesection is absolutely necessary during the stage of inflammation and excitement: afterwards, the

skilful use of alteratives, laxatives, stimulants, and a full diet is recommended. Digitalis, tartar emetic, opium, calomel, scammony, &c., have been found of great benefit. Counter-irritation is also of singular advantage. Shaving the head, and keeping it covered with an ice-cap, together with the various means of refrigeration, have also an important effect. Again, solitary confinement and hard exercise in airy apartments which are made perfectly dark, should invariably be instituted; because, by this means, the faculties will be sparingly exercised, and consequently the ingress of any new diseased sensation, or conception, from the contemplation of external objects, will be prevented. The internal and external use of iodine and its preparations, as before-mentioned, will absorb the cortical substance of the brain. Thus, when the seat of the diseased faculties is gone, the faculties themselves disappear; yet they are reproduced by proper tuition and subsequent experience—*Memoria excolendo augetur!* Finally, the intellectual and moral treatment of insanity is involved in this single axiom, "*Let the medical practitioner and the attendants really exercise the greatest degree of affection and kindness to their insane patients; for by convincing them in this way that they have their interest at heart, their cure is more speedily effected.*"

331, Argyle-street, Glasgow,
Sept. 8, 1840.

PHRENOLOGICAL ASSOCIATION.

June 4, 1841.

SENSE OF RESISTANCE AND FACULTY OF FORCE.

Mr. Simpson, advocate, of Edinburgh, read a paper, the object of which was to strengthen the evidence which he had detailed in several papers in the "Phrenological Journal" (see vols. ii. p. 412, iv. p. 266, 314, and ix. p. 193,) and read to the Phrenological Societies of Edinburgh and London, for the conclusion that mechanical resistance is the object of a special sense, which may be called the *muscular sense;* having the whole muscular frame as the external organ; from which the sensation is conveyed by the nervous system to the brain. For the sake of such of his hearers as had not read his previous papers, Mr. S. stated that he had speculated on the subject for upwards of seventeen years, since he first read upon it to the Phrenological Society of Edinburgh, when his attention was addressed to the organ called weight, which he then thought he saw reason for concluding to be the organ of that instinctive perception of equilibrium, which is essential to the exertion of animal power; of that instinct which enables animals to place their bodies in accordance with the laws of gravitation and mechanical resistance in general; in order to walk, stand, run, swim, and fly. A wide field of knowledge, including a great multitude of phenomena, was made clear by this truth. Mr. S. brought many interesting illustrations from diseased manifestations of the power in question. The case of Mr. John Hunter, the anatomist, who sometimes felt as if suspended in the air, whirling round, sinking down, as if perpendiculars were inclined, "he not receiving," as he expressed it, "from his own feelings, information respecting his centre of gravity." The sensation of falling millions of miles described by the English opium-eater, was diseased sensation of resistance, which is another word for support. Mr. S. adduced some other curious examples of morbid action. Finding the organ of weight large in engineers, mechanicians, billiard-players, bowlers, archers, &c., Mr. S. at first thought that nothing else was necessary than this organ, both for resistance and counter-resistance. It was not till Sir Charles Bell read to the Royal Society in London a paper (Transactions, vol. cxvi. p. 163), describing his discovery of a double nervous apparatus, or circle of nerves connected with the muscles: the one nerve conveying to the brain information of the state of the muscle, and the other bringing back the adequate nervous influence to control, guide, and move it, that Mr. S. began to think that TWO faculties are engaged in this operation: the one a *passive sense* for feeling mechanical resistance, the other an active faculty for *applying* counter-resistance; the *sensitive* nerve obeying the one, the *motor* nerve the other. Sir C. Bell had discovered that two nerves, having distinct origins or roots, passed into one sheath for the supply of the muscles; and disease had shown that the sensitive power and the motor power might be respectively and separately suspended. He farther showed that the sensitive nerve passed forward to the skin, and *there* constituted the channel of the sensations of pain, and heat and cold, which are quite different from resistance to the muscles. There was considerable doubt as to whether these nerves supplying the skin were identical with or distinct from the nerves which informed the brain of the state of the muscle; but this doubt seems removed by the case of the muscle called the *motor oculi*, which is supplied with a nerve *purely muscular*, which gives the sensation of the state of the muscle, but does not proceed and spread out in the skin.

Sir Charles Bell read a paper recently to the Royal Society of Edinburgh (Transactions, vol. xiv., Part I, p. 226), in which he says, "We come next to the *third nerve*. This nerve is distinguished from all others: its *origin* is peculiar, and *its distribution*

limited. By universal consent, it has got the name of motor oculi, being distributed to the voluntary muscles of the eye, *and to none others:* so that it directs the axis of the eye in vision, both controlling the muscles, and having the farther property of conveying to the mind the impression of the condition of the muscles. I entertain this idea, because it is a double nerve.

Its Origin.—Our best authors describe this nerve as arising from the *crus cerebri*, and so it does, above all the intricacies of the nervous system: it does not enter into the mixture of originating filaments in the *pons* or *nodus*; it does not communicate with the decussation in the *medulla oblongata; it is in direct communication with the brain.*

As I have already shown that the *crus cerebri* consists of two columns—one of motion, the other of sensation, and that the *corpus nigrum* divides these columns: if a section be made of the *crus* just anterior to the origin of the third nerve, we shall find that we cut through the corpus nigrum. And now, if we take the curette and gently divide the two columns, and so separate them in the direction towards the root of the nerve, we shall divide or split it; showing that part of it arises from the anterior column, and part of it from the posterior column. If we carefully dissect and lay out the third nerve, we have a very interesting view as illustrative of its function, and of the nervous system. The roots as they arise, and for some way in their course, are in round distinct cords, running parallel to each other: they then join together, and form a dense body, in which the filaments are separated, rejoin, and are matted together; after which their progress is as a common nerve. Their distinct origin from the division of the *crus*—the two distinct fasciculi of parallel fibres—the course of these for some way without exchange of filaments, and then afterwards running into intimate union, are circumstances of much interest, as showing the distinction of the crus cerebri, the distinct nature of the roots of the third nerve, and that it is a double nerve dedicated to the finer motions of the eye, peculiar in its structure, and yet in conformity with the system which I have followed.

A question is naturally suggested here. Is the third nerve a *sensitive* as well as a motor nerve; and if so, how comes it that there is no regular ganglion on the root which it receives from the sensitive column? This would incline me to believe, that the ganglionic root is an organisation on the spinal nerves and fifth pair, suited to that sensibility which the body universally, and the *surface* especially, enjoys, which gives pain, and becomes a guard upon the frame.

At the same time, it will not be overlooked that the texture of the nerve at the union of the fasciculated roots very much resembles the texture of the spinal ganglion. The difference may be reasonably attributed to the distinction in office; i. e., that it has no reference to the sensibility of the surface, but only to the condition of the muscle.

The very peculiar and unique position of the roots of this third nerve, whilst it places the function of volition directly in communication with the sensorium, and unembarrassed by communication with other nerves, has also this superior advantage, that it is in direct relation to the sensitive column. This connection, as I have just said, has no reference to common sensation; *for the nerve is strictly limited to the muscles, but only to that property of estimating the condition of muscular activity.*

The extent of Sir C. Bell's discovery, in other words, that he has discovered a nerve, the servant of the muscular sense, distinct from the common sensitive nerve, has been disputed. Mr. Simpson held, that the case of the nerve subserving the *motor oculi* is conclusive in his favour; that there is a muscular nerve, and a *sense* of the state of the muscle; and seeing that it can only be some kind of resistance which operates on the muscular sense, resistance must be the object of that sense.

But if this were all, we should be left with a mere passive sense, which would be of no use to us, and we should perish. We have something to *do* as well as to feel, and therefore must possess an *active power* as well as a *passive sense*. The latter would never move our muscles; so that there must be a voluntary positive act, and a *motor* nerve as its instrument. The conclusion seems unavoidable; that in every change produced by an act of the will, through the instrumentality of the motor nerves, on the state or condition of even the minutest of above four hundred muscles, with which the human body is furnished, two distinct functions are exercised, two separate operations performed. The *muscular sense* does its specific duty, and reports *inwards* to the brain the *state* of the muscle, whether in repose or tension, and in what degree of tension; and subsequently, although instantaneously, the *faculty of muscular adaptation*, or voluntary motion, performs its part, and with the most perfect calculation of the degree of counter-resistance, changes the degree of contraction; in other words, the state of the muscles.

Important consequences follow from this distinction between the sense and the internal faculty. While the precise function and extent of function of both are philosophically discriminated, the discovery of their almost invariably *joint* operation will render, yet clearer than hitherto, the manifold phenomena of the relation of animals to the mechanical laws of the material world. Take, for example, those two most constant of all

resistances, gravitation and the impenetrability of the earth's surface, *for, to the sense*, they are both resistances. Gravitation, by attracting our bodies in the line of the earth's centre, prevents them from flying off as portions of matter into infinite space; while the resistance of the solid ground antagonises that attraction, and saves our bodies from being actually carried to the centre; the result being that they are retained on the surface. These joint, though counter-resistances, are felt by us in consequence of their producing a certain state of our muscular frame. Suppose us at rest, sitting upon a chair, the whole frame in equilibrio, the muscular sense informs the brain whether we are attending to the information or not, that the muscles are in a certain satisfactory state; a state, the disturbance of which is painful to us, by failure of support, or the sense, however brief, of falling; for falling is nothing else but the operation of gravitation, not antagonised by the counter-resistance of the earth's surface, or something solid resting thereon, as a chair, a floor, a horse, or a carriage. The fall or prostration of our body itself, from the vertical to the horizontal position, depends upon the failure of another kind of antagonising power, to be presently adverted to. We wish to change our position and stand erect; the sensation of the state of the muscular frame, at the moment of forming this resolution, in other words the mere sense, would never enable us to perform the act of standing erect; under its province we should simply continue to feel passively the state of the muscular frame which gravitation and the earth's resistance produce, and this without the slightest possible variation. But a distinct power comes now into action, and let us see what it does for us. The instant the will resolves that we shall rise up from the sitting posture, not only is a message sped by the faculty under consideration to those muscles which, by their contraction, draw the legs close to our chair, but, to the end of aiding and antagonising, the muscles of the trunk, neck, and arms, are subjected to a new contraction; perhaps few muscles in the body are left totally unsummoned and unchanged for the important and complicated feat of standing erect. That this is an exertion, and a great exertion, of muscular power, is familiar to every one who has experienced the fatigue of long standing, when the muscles are successively appealed to in vain for a posture of ease, and the sufferer longs to sit or lie down. Suppose us erect, the duty of the faculty is by no means done: it has mounted guard, and it never deserts its post or relaxes its watchfulness. All unconscious as we may be, our instinct of calculated force is active, and, in a manner which would excite our wonder and admiration could we but see and comprehend it, is keeping to their duty some hundred muscles, each performing, by nicest calculation of its directing power, the precise part allotted it, and exercising the exact measure of force which is necessary to antagonise the power with which gravitation is unceasingly endeavouring to bring our body, so much longer than it is broad, and placed on so narrow a base as the feet, down to the safer base of its back, breast, or side, on the ground. The muscular frame antagonises the resistance of gravitation; but this latter resistance itself assists in keeping us erect, and we could not stand without it: it is the basis of the whole operation—the perpendicular support, antagonised by the resistance of the ground in the vertical direction; while it is the duty of the muscles to keep the body *laterally* in that position, in which the resistance of gravitation and of the earth's surface are vertically applied. If the muscles lack strength to preserve that position in which a perpendicular from the centre of gravity of the whole body shall fall within the space occupied by the feet, the body will fall; and it falls instantly, in consequence either of weak muscular power, or of the suspension by some cause of unconsciousness, as syncope, intoxication, or death, of the faculty for applying the necessary force to preserve the balance. We have an appetite for the perpendicular, and any defect of it is painful, and instantly felt by the muscular frame; this will be apparent to any one who is pushed or pressed out of his perpendicular, and staggers to save himself from falling; and this it is which renders the mere sensation of *falling*, independent of and before the blow to be received, so alarming and painful.

Again, it may be that having succeeded in standing erect, we desire to walk. To produce motion it is evident that equilibrium must be disturbed, for equilibrium is essentially rest. In standing erect, so long as the muscles have force to keep the body in that position in which the two resistances of gravitation and the ground are vertically applied to it, there is, theoretically at least, a state of rest. What, then, is our first movement to attain the end of walking? Before we move the brain is cognisant, by the nerves of muscular sensation—and there are no such faithfully minute and prompt informers—of a certain state of tension of the muscles necessary, and no more than necessary, to preserve at rest the upright position; but their state must be changed, else there would be no change from the vertical position, and therefore no advance. The faculty under consideration changes the state of almost every muscle in the body, by the required contraction, and no more, and the body is slightly thrown forward. This inclination in walking is so slight that it is scarcely recognised; but its necessity can be put to the test, by any one attempt-

ing to advance by merely planting the foot forward, without an accompanying forward movement of the body. By the inclination of the body the equilibrium of the standing position is destroyed; but the faculty, in obedience to the necessity of equilibrium, instantly restores the disturbed balance, by that specific muscular contraction which advances the foot. This, which is the first step of walking, is a new position of equilibrium, or rest; and, because of an enlarged base, a stronger position than that which the body before occupied. A second step is to be taken, and the faculty, informed by the sense of the state requiring to be changed, repeats the first operation; and does so again and again till the walk is finished, and we change the state of the muscles to prepare for standing still and erect, and again for sitting or lying down. Nothing can be imagined more exquisitely precise than the measure of force allotted to the muscles by this wonderful instinct, for each and all of these operations. Gravitation, the resistance of the ground, and the contraction of the muscles, are all instantaneously and unerringly calculated. If a false step follows, it is not the fault of either the sense or the internal faculty; it is ignorance of some external condition: for example, the ground, which was believed to be level, is uneven; there is a step down or a step up not allowed for; there is a hole covered by a thin turf; and the unprepared frame receives a shock or jar of the most unpleasant and alarming kind. When the external conditions are true the faculty is unerring. In short, if there be any of our intellectual powers from which we can obtain an idea of those instincts of animals which produce the most certain and complicated results, like that perfect piece of mathematical workmanship the cell of the honeycomb, and all the varied architecture, as it is called, of insects and birds, it is this our almost automatical power of disturbing and restoring equilibrium—a feat performed almost without consciousness, yet as complicated, as precise, as mathematical in its result, as the cell of the bee. Short way, indeed, do we even yet see into the Scriptural truth, that we are "wonderfully made."

Mr. S. instanced only standing and walking; but it must be obvious that the sense of the muscular state, and the faculty for changing that state, must both be concerned in the simplest and in the most complicated animal movements; and in each and all of these movements, however rapidly performed, must both be in vigilant operation. To the minutest movement in the magical flight of the fingers over the keys, strings, or stops of a musical instrument, the sense and the faculty have both, with exquisite precision, done their duty a thousand times over, before the piece of execution is finished; and in the speed of the race-horse, the ostrich, or the antelope, every movement is calculated by the animal, the state of the muscles at every spring felt, and the exact force to be applied to the next correctly estimated. The inferior animals, not less than man, must possess both the sense and the instinct, for both are essential to their existence: they could not attain equilibrium without them, and would perish, lying like dead matter on the ground, or floating, if lighter than these media, in the water or air; but the moment they crawl, or creep, or walk, or run, or leap, or fly, or swim, both this sense and this faculty *must* be possessed and exerted by them. Some have thought these almost unconsciously performed muscular movements automatic; but this is an error, for the motor nerves connected with the voluntary muscles are servants of the will. Bellingeri himself observes that the motor nerve, but not the sensitive, obeys the will, which is the same as if he had said that the former is the medium of an active faculty, and the latter of a passive sense.

Mr. S. adduced several proofs and illustrations; first, a few examples of the sudden struggle to restore equilibrium, when disturbed by a change in what may be called the angle of gravitation. If a horizontal platform on which we stand, the deck of a ship for instance, be suddenly sloped, our whole muscular frame feels, *as a sensation*, the change of the angle of gravitation, and the consequent disturbance of our equilibrium. So far the sense. But we instinctively lie down and *hold on*, as the sailors say, by every possible exertion of our muscular power, which the sense alone would not enable us to do, without the instinctive active faculty. This is neither, as some may think, knowledge of the danger nor fear; for a kitten or a puppy a few hours old will do the same thing, while an infant shrinks when the nurse's support is lessened; in which cases, fear of consequences is out of the question. Nature did not trust to that tardy safeguard, but established a more prompt means of safety, by giving the animal a salutary uneasiness in its muscular frame, and moreover endowing it with an impulse and a capacity instantly to exert itself to remove that uneasiness. The descent in the car of the Montagne Russe, once famous in Paris, is perfectly safe, but its effects on the state of the muscles of some persons,—and the same is true of the *descent* in a swing,—is utterly insupportable. Sleep and total intoxication have both the effect of relaxing the muscles. Garrick was told that he had failed to imitate complete drunkenness on horseback, as his left leg was sober, keeping, as it did, a rigid position in the stirrup. The sleeper awakes, and the state of his muscles is instantly changed to that of tension; he stands, he walks, and I have al-

ready described the changes his muscles undergo by these operations, and the manner in which he alternately disturbs and restores his equilibrium.

The *preparation* of the muscles for the intended exertion, which we make in our confidence in the uniformity of mechanical nature, is an interesting field of observation. Our success passes unnoticed by us, but our miscalculations give us good reason to mark them. Such mistakes, as already observed, originate not in preparing too much or too little force for a *known* resistance, but invariably in some misapprehension of the true nature of the resistance itself. The mistake may be our own, as when there is an unexpected step at the foot of a stair, or a step expected but not found at the top, for the first of which the muscles are unprepared, and for the second over prepared: and there is little difference in these in the shock experienced. A vessel full of water, it may be, is often lifted by us; if it chance to be empty when we believe it full as usual, we over prepare the muscles to lift it,—we put on too much force, and it starts up, with an unpleasant feeling, in our hands. Sometimes our miscalculations are produced by others suddenly changing the resistance upon which we counted. Thus a dragoon falls forward when his enemy alertly avoids the stroke of his sabre; he flies over his horse's head when the animal at speed suddenly stops; when pulling a rope against an antagonist, we fall on our back if he suddenly relaxes his hold: yet, in all these cases, a moment's warning of what was to happen would have prepared the muscles to antagonise the force, and none of the three results would have taken place. Practical jokes, often very dangerous experiments, for the most part consist in deceptions which lead us to over or under prepare the muscles. What we hold loosely is knocked out of our hands, our muscles being unprepared; while slacking a rope, eluding a push, avoiding a blow, and many other modes of balking a powerful effort, take advantage of our over-prepared muscles.

Some animals that spring, especially of the feline species, such as the cat, the lion, the tiger, &c., seem to possess more power than others over their muscles; in other words, to have a more acute perception of their state, and the changes in them necessary to execute the required movement. In them, both the sense and the instinct are powerful. The cat falling on her feet, often from a great height, and in such a case of course unexpectedly, seems to prepare her muscles for the resistance she is to meet with on finishing her descent, and reaps the full benefit of the elastic cushions which fortify her feet, on which she always lights.

Mr. S. mentioned some failures both of the sense and of the internal faculty occasioned by disease. An intoxicated person suffers severely from the sense of disturbed equilibrium; while the faculty of restoring it, although laborious efforts are often made by him, is greatly abridged. Much of the muscular power, or, in other words, the energy of the faculty, is gone; his tongue refuses its office; his eyes either will not open or will not shut; he misses his lips with his half-spilt glass; and can neither keep a straight course nor reach a desired object. In palsy and St. Vitus's dance the sense remains, but the motor nerves refuse to obey the internal faculty. In palsy, the limb affected is often, from a false perception of gravitation, felt to be very heavy. An additional instance to those furnished by the English opium-eater, is mentioned in the "Phrenological Journal:"* a single experiment, for a philosophical purpose, was made by Mr. Madden, the traveller in Turkey; and the effects of the drug, on the muscular frame of others as well as on his own, are vividly described, and are strikingly confirmatory of all I have advanced. He concludes—"I made my way home as fast as possible, dreading, at every step, that I should commit some extravagance. In walking, I was *hardly sensible of my feet touching the ground*; it seemed as if I slid along the street, impelled by some invisible agent, and that my blood was composed of some ethereal fluid which rendered my body *lighter than air*." In Mr. Madden's state, neither the resistance of the ground nor that of gravitation was properly *perceived* by him; which proves that we not only require to be *subjected* to these resistances, but the faculties which were given us in relation to them must be in a sound condition to *perceive* them, in order to the regulation of our muscular movements.

The following passage, slightly varied from a paper in the "Phrenological Journal,"† on the agreement between the cerebral development of Ducrow, the noted equestrian, and his wonderful powers, well illustrates the operation of both the sense and the internal faculty:—"Let us consider Ducrow's easy and never-failing maintenance of his balance, in the critical position of standing on the back of a horse at full speed. The more nice the perception of a changed state of the muscles, the more readily will their equilibrium be restored; and it is only supposing this *sensation* very exquisite, and the *motor nerve* and muscles very obedient, to conceive equilibrium not only recovered when endangered by great variations of gravitation, but so steadily preserved, as never to be lost, or even appear to be lost. It requires no inconsiderable degree of the sensation of resistance or its failure, and the response of muscular contractility, for the human body to stand erect on the ground;

* Vol. vi., p. 139. † Vol. v., p. 222.

it is an increased degree of the quality to preserve the balance of the body on a moving support, as on a cart in motion; but when the ever-varying and muscle-changing forces of which the motion of a horse at full gallop is the cause to Ducrow standing on the saddle, nay, of six horses at one and the same time, produce no perceptible change on the steady, easy, and even graceful attitudes of the rider, the highest degree of the *equilibrium-preserving* power is attained." In Ducrow, the organ for weight, or more correctly for the application of mechanical force, is unusually large. It is likewise very large in a gentleman of my acquaintance, who, among other talents, possesses that of mechanics and engineering very remarkably. He assures me that he has great power of balancing his body; and when a boy, was the wonder of his companions for the chamois-like ease, and safety from wet feet, with which he skipped about from stone to stone in a shallow river.

The knowledge of resistance being acquired from gravitation and impenetrability, and of force from the instinct of muscular counter-resistance, the combined effect, probably as the result of experience, is much more extensive than the regulation of our muscular movements. We can perceive the mechanical relations of external matter to external matter, and provide for our safety and increase our power by taking advantage of these relations. We find the different relative powers of resistance, called their density, in different kinds of matter, and availing ourselves of this knowledge, and exercising another faculty, namely, constructiveness, which manually fashions, forms, and constructs, we make tools and instruments; hence we know and prize iron as the most valuable of metals, and form the axe, the chisel, the knife, and the saw. The mechanical powers, in their rudest state, are applied instinctively, in other words, under the impulse of the faculty in question.

A more extensive and accurate induction of facts than yet achieved is necessary for the localising of the organ of the faculty for counter-resisting resistance,—the application of force. Mr. Richard Edmonson, of Manchester, in two papers contributed to the "Phrenological Journal" (vol. vii., p. 106, and ix., p. 142), has endeavoured to show that the organ hitherto called *constructiveness* is that organ; and that what has been called *weight*, is "the perception of the position of objects relative to their centre of gravity," in other words, the perception of the direction of gravitation,—the perpendicular. The preponderance of evidence, however, is in favour of the organ called weight, from its being found invariably large in engineers and mechanicians, while constructiveness is not always found to be so. A standard for the vertical seems necessary to our safety, to our perception of what we call *up and down* on revolving globes, and to the precision of all our movements; and a nice perception of it seems necessary to the just application of force: so that it is quite conceivable that the same faculty perceives the vertical, and applies force in its due degree. Mr. S. adduced many instances; but as he concluded that more evidence is called for, we shall not occupy space at present in detailing those instances.

In the discussion which followed Mr. Simpson's paper, no objections were stated to his conclusion, that man and animals have a *sense* for resistance and a *faculty* for applying force. Dr. Caldwell, of America, spoke at some length upon the subject, giving it as his opinion that that twofold truth had been demonstrated.

REMUNERATION OF MEDICAL MEN IN THE UNIONS.

PROCEEDINGS AT BARNSTAPLE.

To the Editor of THE LANCET.

SIR:—As a reader of your liberal Periodical, THE LANCET, I, of course, have noticed the occasional communications, conveyed through its pages, to the medical public, as well as some excellent remarks in your leading article relative to the manner in which professional men are *remunerated* for their attendance on paupers, under the New Poor-law Act; and it is in consequence of one such communication which I read last week that I am induced to address you.

I have never had the honour to hold any appointment under the poor-law commissioners, but for twenty years previous to their assuming the "reins of government," I had the medical care of three large and populous parishes, and consequently must have had some little knowledge of the trouble and expense incurred by such a charge, and how inadequately the best paid medical men were remunerated for their time and for medicine supplied to the sick and suffering poor.

I cannot forget with what pleasure I looked forward (and, I believe, I stood not alone in my pleasing anticipations), when the projected alteration in the management of the paupers was talked of, because I hoped that such alteration would be a real *amendment* in every way, not only for the poor themselves, but also for those who had the charge of them; and in the latter were included the medical attendants. How far the former have been benefitted by the change, I will not stay here to inquire; but that the three "commanders-in-chief" are well provided for, there cannot, I think, be any doubt; nor does it appear that many of those who hold official situations under them are badly paid. Among the last-mentioned may be reckoned those members of the legal

profession who fill the situation of secretaries to the different unions, all of whom appear to receive at least remunerating salaries.

But, ah! how sadly was I disappointed in finding out the way in which the medical profession were to be paid for that assistance which they, and they alone, can render, and which they are called upon to do at all times, and on all occasions, where their attendance is required. Why has it been thus, sir? Why have medical men been made a mark of? Surely the profession itself is one which ranks equally high with either of the other learned professions, and has attached to it all the moral responsibilities which they have, in an equal, if not, in some instances, even in a higher degree, and yet its members are so inefficiently paid for their services,—services which must be had, which may not, cannot be dispensed with.

I take leave to ask you, sir, who are the parties most to be blamed? For, admitting that any man or set of men attempt to make a mark of, or to degrade in any way the members of the medical profession, either individually or collectively, are they, therefore, *obliged* to endure such treatment? Certainly not; and I think that, however much you and every other really liberal man must deprecate the system of medical remuneration under the present Poor-law Act, you will yet allow that medical men were at liberty, when they first understood the manner in, and rate at, which they were to be paid, to refuse *tendering* their professional aid under a fair remunerating price; and for such a paltry pittance, as it was too clearly intimated, would be doled out to them.

I am aware I may be told that these remarks come late in the day; but as it is never too late to amend the error of our ways, so neither do I esteem it yet too late for our profession to make a determined stand against those well-paid commissioners who seem so much disposed to get their services for little or nothing, whilst themselves are enjoying the sweets of almost a princely income.

I have been led to make these general remarks from noticing a communication, as above stated, in THE LANCET, relative to a particular branch of medical remuneration—I allude to a letter addressed to you, sir, stating the pleasing fact, that in some provincial town fourteen (I believe) out of fifteen medical men had resolved not to vaccinate the paupers for less than two shillings and sixpence for each successful case. Such a resolution reflects honour on those who formed it. Similar instances may have occurred and been recorded in your valuable Publication, and have been overlooked by me, though I have noticed many. One such took place at Barnstaple, a few months ago, at which I was present; and it was my intention then to have sent you an account of the result of that meeting, but circumstances, which it would be useless now to state, prevented my doing so at the time.

At that meeting, not only did the medical men present pledge themselves not to vaccinate at less than half-a-crown for each successful case, but with a spirit which ought to actuate every member of an honourable profession, took cognisance of an advertisement published by the Barnstaple board of guardians, in which that body had signified their determination to discontinue a trifling per centage, which had before been allowed to district medical men on relief ordered by them, for out-door patients. This was considered to convey an insinuation that the medical attendant might be induced to afford such relief merely for the sake of getting the said per centage, which, in all probability, would never amount to thirty shillings profit among all the medical men of the union, comprising twenty-nine parishes.

In accordance with the aforesaid pledge, it was "resolved" *nem. con.* that the substance of it should be forwarded to the Barnstaple Union, together with a recommendation to that body to give an order to all *proper applicants* to have their children vaccinated by their own medical man,* and to pay two-and-sixpence for each case; and at the same time an expostulatory address was sent to the board of guardians, stating that the above-mentioned advertisement contained an "insult by imputation to the members of the medical profession, and requesting them (the guardians of the poor) to withdraw it."

Now, sir, I think this meeting has had a good effect, inasmuch as the lowest sum given, as far as I can ascertain, in this neighbourhood for vaccinating the poor, is half-a-crown for each successful case; whereas, in some adjacent unions eighteenpence is offered as the *maximum*. Yes! one shilling and sixpence is *liberally offered* as a remunerating price, for doing that which cannot be *well done*, except by a person who has studied and practised vaccination professionally; for it is but too well known that many children have been vaccinated by old women, and others with a stocking needle, dipped in the vaccine virus *at any but the proper time*.

Could the immortal Jenner and many of his contemporaries and more immediate successors look up at this time, however much they might and would rejoice to see vaccination progressing rapidly, yet may we not venture to imagine that a great damp would be thrown on their joy when they saw the manner in which their followers were paid,

* Meaning that if labourers wished to have their children vaccinated by any regular qualified person instead of the "district surgeon" they might be permitted to do so.

if paid it can be called, for rendering so great a blessing to their fellow-creatures.

I will again ask, is it not yet possible to make a determined stand against this humiliating, this very degrading rate of payment which the poor-law commissioners offer for services which surely deserve a higher reward, and which must ultimately be given if the members of the profession will, "one and all," act with due respect to their profession, and in common justice to themselves?

I am well aware, that unless it was the "law of the land," that a fixed sum was established as the minimum charge, you cannot prevent any one from charging as little as he chooses; but I do think that among the members of the medical profession, to every individual of which the rank and title of a GENTLEMAN ought to be, and is (unless by his own base conduct he forfeits it), indelibly affixed, a law of honour, honesty, and liberality should exist; and that where any one acts in a manner derogatory to such principles, and, therefore, to the character of a gentleman, that then he should become a marked man, and his professional brethren should express their disapprobation of his conduct by public expostulation and reproof.

If such were to be done, I really think that (unless such men were dead to every proper feeling) they would soon be made ashamed of their conduct, and their example might and would deter others from striking on the rock which they had split on. At the same time, I know too well that there are some lost to all proper feeling; and how to deal with such, I confess myself at a loss. It used to be said that there was a "black sheep in every flock," but such are now becoming very rare; and as regards the large flock of medical men, I trust that ere long none such will be seen or heard of.

I will not trespass longer on your time, or occupy more room in your pages, which, I am well aware, should be filled with matter of more importance; yet as it appears to me that every voice should be raised against the *oppressive, grinding, and degrading system* which the poor-law commissioners (and in too many instances, *but not all*, those under them) have adopted, and are pursuing towards our profession, I will venture to solicit the favour of your inserting this my mite of contribution at any time when you have a column to spare. I remain, Sir, your obedient servant,

W. VELLACOTT, Surgeon R.N.

Bracenton, Barnstaple, May 25, 1841.

TREATMENT OF DEFORMITIES OF THE KNEE.—KNOCK-KNEE.

To the Editor of THE LANCET.

SIR:—I beg to forward you the following cases of inward inclination of the knee, familiarly known by the name of "knock-knee," treated by operation; and should you consider them of interest to the profession, I shall feel obliged by your giving them an early publication. I am, sir, your obedient servant,

R. W. TAMPLIN,

Surgeon to the Institution for the Cure of Club-foot and other Contractions.

29, Great Queen-street, Lincoln's Inn-fields, June 24, 1841.

CASE 1.—H. G., ætat. 16, of delicate, unhealthy aspect, stated, when six years of age his feet were observed to incline outwards, and his knees, in the act of progression, to knock together, which gradually increased and prevented his walking any distance without the greatest inconvenience. Six years since he experienced a pain on the inner side of each knee, which prevented his taking but a few steps without resting. During the last eighteen months the deformity has rapidly increased; and in addition to the pains in the knees he has also had pain in the ankle-joints, accompanied with a spasmodic action, or, as he himself terms it, a catching in the muscles of the leg, which compelled him to rest for a quarter of an hour at a time.

The present appearance of this case, when the knees are placed parallel to each other is, that the feet are eighteen inches apart; and in consequence of the great deviation of the legs from the straight position, his feet have the appearance of the talipes varus deformity. His manner of walking was such as to give the impression of malformation of the bones; and this I imagined to be the case previous to an examination, for when asked to walk his knees rolled completely over one another. Having satisfied myself by a very careful examination that the deformity mainly depended upon contraction of the vastus externus, fascia lata, and biceps tendon, I proposed to his parents the following operation, as likely to remedy, if not cure, the deformity.

Dec. 3, 1840. Assisted by my friends, Messrs. Harvey, Garlike, and Berry, I divided the vastus externus and fascia lata of the right leg, which, after division, was found to have contracted upwards of two inches. The wound was retained by suture and bandage, but owing to slight hæmorrhage, union by the first intention was prevented, and I was in consequence unable to apply the splint for fourteen days. Extension was then commenced by means of a modified Dessault's splint, having a joint at the bend of the knee, acted upon by a male and female screw, the limb being retained in its position by means of straps attached to the splint through its entire length, the extension being daily increased, until the 15th of January, when the leg was quite straight. This day, with the assistance of my friends

before-mentioned, I divided the muscles of the left leg. Nothing untoward occurring, the splint was applied in a few days. It would be superfluous to notice the daily progress: but on the 5th of February the leg was straight. Upright supports were now applied from the hips downwards, to retain the legs in their straight position, and which enabled the internal lateral ligament and other structures to recontract. At first the boy experienced slight difficulty in walking, but on the 24th of March he stated he could walk without pain, and almost any distance; his general appearance and health have much improved, and his height increased four inches in consequence of the removal of the deformity. The casts are in my possession, and I shall be happy to show them to any of the profession who may feel interested in the treatment of deformities.

Case 2.—J. G., ætat. 25, the brother of a medical man, states that he had suffered from this deformity for nine years, which he attributes to the carrying of heavy weights during his apprenticeship. The inward inclination of the knees gradually increased, occasioning him great pain and inconvenience in walking, giving him the sensation, also, as if his legs went rather behind than before. His feet, when the knees are placed parallel to each other, are rather more than thirteen inches apart, and, as in the last case, turn somewhat inwards, giving the appearance also of slight talipes varus: he has, at the recommendation of several medical gentlemen, used various mechanical contrivances without benefit.

April 19. Assisted by his brother and my pupil, Mr. Harper, I divided the vastus externus, fascia lata, and biceps of both legs. On the 26th the splints were applied; gradual extension was kept up, and the legs brought to the straight position on the 15th of May. On the 22nd he was enabled to walk, as in the previous case, by means of support.

Case 3.—E. H., ætat. 27, of Stockport, states, that at the age of ten he commenced working in a cotton-mill; four years afterwards he noticed the right knee inclined inwards, which gradually increased until the last year; from that time he has noticed no alteration. It is remarkable in this case that the opposite deformity, or what I should term "outward inclination of the knees," exists in the left leg, as if the pressure of the right knee had forced the other outwards, although in all probability it arose from the increased efforts of the left leg to compensate for the weakness of the right. The principal inconvenience he experiences in walking is, his liability to fall from any trifling interruption in his way unobserved, giving an extremely painful sensation at the knee as if it were dislocated or broken, arising from the already partial dislocation of the patella and relaxed internal lateral ligaments. A line drawn from the trochanter major to the outward ankle was found to leave at the knee-joint a space of five inches, which, with the outward inclination of the other leg, gave him a most curious appearance in walking.

On May 31st, assisted by my friend, W. Harvey, Esq., and my pupil, Mr. R. Harper, I divided the vastus externus and fascia lata, the splint was applied two days afterwards, and on the 21st inst. his leg was perfectly straight. The support was now used, and he is enabled to take daily exercise.

In all cases where the tibia is found to have left its natural position from the articular surfaces of the femur, a great prominence is given to the internal condyle; and I am aware it is the opinion of some of the profession that an actual enlargement of the condyle exists, and many who had examined this case had given an opinion of that nature. I have examined a great many cases of this species of deformity. The three cases I have sent you of an aggravated character confirms an opinion I have long since entertained, that no alteration takes place in the articular extremities.

No deformity is more common than this in young and delicate children, combined frequently with more or less curvature in the bones; such cases will generally yield to the ordinary means without operation; but in adults, where the structures have arrived at their natural strength and firmness, the deformity being permanently established, the great resistance met with in the contracted muscles is such as to render it in my opinion incurable, excepting through the operation.

WRY-NECK. — DIVISION OF THE STERNO-MASTOID MUSCLE.

To the Editor of THE LANCET.

SIR:—Should you deem the inclosed case of sufficient interest, its insertion in your valuable Journal will oblige your obedient servant,

PERCIVAL GODFREY PRICE.

Margate, June 17, 1841.

Henrietta Westfield, ætat. seven years, came under my notice, presenting the following appearances:—The chin was turned towards the left shoulder, midway between it and the sternal extremity of the clavicle, the right ear being brought nearly into contact with the shoulder of the same side. The face was thus placed obliquely; this was particularly observable in the line of the eyes. The anterior portion of the right sterno-cleido-mastoid muscle, was found contracted to half its normal extent, excessively rigid to the touch. The cervical vertebræ were directed obliquely downwards to the right side; a right lateral curvature of the dorsal

also existed. This was clearly consequent upon the elevation of the right shoulder, made to relieve the tension arising from the peculiar position of the head. The mother stated that no deformity existed two years since, when she left the maternal roof to reside that time with her grandfather, and among strangers. The deformity was noticed immediately on her return.

I can only account for the occurrence of the affection by supposing the natural shyness of the child, which was unusual, induced her "to hang her head," till this became a confirmed habit, and produced permanent muscular contraction, analogous to that met with among the fakirs or wandering mendicants of India. I determined to perform a subcutaneous section of the muscle. I was assisted in the operation by my father and my friend, Mr. Chalk, surgeon to the Royal Sea-Bathing Infirmary. The division was readily accomplished by an incision through the skin at the anterior edge of the muscle, sufficient to admit a grooved director, which was passed behind the muscle, and the fibres divided by a small knife, carried along the groove, brought forward, and withdrawn, leaving the skin entire. The section was attended by a snapping sound, and the head then regained its natural position; only a drop or two of blood oozed from the orifice. The head was encircled for two or three days by a double-headed roller, the ends of which were carried beneath the left axilla, so as to keep the divided ends of the muscle as far apart as possible. Two weeks have now elapsed since the operation; the spine is perfectly straight; indeed, this was observed the day following. The head can be moved freely in all directions, and the only imperfection is a slight degree of obliquity in the line of the eyes; but this is fast disappearing.

DISPENSARY CASES.

By Charles Clay, Surgeon, Manchester, *Lecturer* on Medical Jurisprudence, &c.

ICTHYOSIS.

Mrs. Marland, of Ashton, brought her little son to the dispensary, four years old, who had been subject to this very singular affection for three years; he was an entire mass of diseased cuticle from head to foot, with the exception of the hairy scalp and the face; the latter of which was affected, but with a milder form. The ugly appearance of the child when stripped was extreme. I agree with Plumbe, Bateman, Girdlestone, and others, that no analogy exists between its appearance and the skin of the fish tribe, but that the dry, crackled, and horny character of the elephant skin is much nearer in resemblance to it than any other object; consequently the term icthyosis is inappropriate, and, perhaps, that of elephantiasis more correct. In this case the skin was dry, horny, and crackled, of a dirty brown cast, from the accumulated dirt upon it, and from which it was very difficult to free it; to the touch the skin was equally rough every way, like a very coarse file, whilst that of the fish tribe is only rough in one direction. It has been remarked by Girdlestone that the constitution in these cases seldom, if ever, appears affected, and that the countenance is unusually florid: in the present case the countenances of the boy and mother were very florid; but the father, grandfather, and grandmother, were sallow, emaciated, and seldom well in health. Various modes of treatment had been resorted to by different practitioners, but the appearance continued without any alteration, save for the worse: almost tired, and despairing of success, they applied at the dispensary in November, 1840. The child was prescribed for. It would be useless to recapitulate all the means tried. Warm-baths, iodine, nitrate of silver, mercurials, tonics, vegetable and mineral, diaphoretics, and a host of remedies, both externally and internally, recommended by various authorities without the least improvement in the case; every attempt appeared only to stamp the case as hopeless, when I ordered the following ointment to be applied over the whole surface night and morning:—

℞ *Subcarbonate of potass*, ℥iij;
Lard, ℥viij. M.

I must confess I had little faith in the application; but in a case so obstinate any reasonable and not decidedly injurious application was justifiable. To my surprise, however, after three days using, I found the whole diseased cuticle peeling off in large masses from all parts of the body, leaving a new but very tender skin beneath; and on rubbing the surface with the hand, the skin had a soft feel, and some remnants of the old cuticle (sufficiently light to fly about) separated on friction. After the application had been continued for about four weeks, the skin became so soft and tender that I stopped the ointment and substituted the following mixture:—

℞ *Infusion of gentian*, ℥viij;
Subcarbonate of potass, ℥j. M. Half an ounce to be taken three times a-day.

It is now nearly three months since the cuticle peeled, and there is no appearance of a return of the disease; the medicine is only taken occasionally, and the child sent to the sea-side. Amidst the acknowledged obscurity both as to cause and treatment of this disease, the plan here proposed is worthy of trial; as such cases are rare, it will be some time before the means can be properly tested: if, however, they should be found as efficacious in other cases, the circumstance is worth recording.

EPILEPSY.

Anne Newton, ætat. 35, applied for relief, being subject to fits of epilepsy since five years of age, which up to the time of menstruation were only occasional, but after that period they became more frequent, and still more so when she married. She had had three children, and at present the attacks became so constant that she frequently endangered her life by falling into the fire and other dangerous places. I ordered the following mixture:—

℞ *Gum assafœtida*, ℥ij;
Aloes, ℥j;
Carrigeen moss, ℥ss;
Boiling water, ℥j. M. To be infused for two hours; half an ounce to be taken every three hours.

Immediately after taking this the fits abated, and after using it a week she had not a single attack for three months. Fancying herself well, the medicine was neglected, and the fits returned, but not very violent, and on resuming the mixture they again disappeared. It is now ten months since she had any attacks, and though heartily tired of the medicine, she feels reluctant to give it up lest the fits should return.

James Booth, ætat. 21, had been subject to epileptic fits since he was an infant, which, as he grew, became more frequent and severe, until his life was a burthen to him. He commenced the infusion as ordered in Newton's case, and whilst steadily taking it he was entirely free from them, but whenever the medicine was neglected the fits returned; being of unsteady habits this was frequently the case, but the effect was very striking when he could be induced to persevere in taking it.

The formulæ here recommended cannot be considered as entirely new, nor is it recommended as a specific: assafœtida has long been used for cases, and extolled by various authorities. The two cases here given, prove that the formulæ recommended have considerable power over the symptoms; and, perhaps, if persevered in for a considerable time, a permanent cure might be established. The medicine is a very nauseous one; but any remedy is preferable to the misery of constant attacks of epilepsy.

Abram Lees, ætat. 36, had been subject to violent epileptic fits since infancy; this case is an echo of the preceding; as long as he persevered in the medicine the fits were entirely done away with, and returned (though not so violently) when it was neglected.

REMARKABLE CASE OF

DEPRESSION OF THE SKULL.

To the Editor of THE LANCET.

SIR:—D. A., ætat. 45, called on me, in the spring of 1819, for some trifling medicines to keep his bowels regular. His hat being off, I observed a surprising depression of the parietal bones of the head: such being the case, it naturally led me to inquire the cause, &c. He stated that, as long ago as fifteen years, he was cutting timber in British North America, and by himself at the time, when a rotten branch of the tree (of a very considerable size) fell across his head, when he was struck down, and insensible for a time; but at length he was able to rise and reach his home. He was more than fifty miles from any medical aid; and in fact he was not able to pay from fifty to one hundred dollars, the usual charge of any surgeon for such a distance; of course, he never had any medical assistance whatever. When I saw him he was in perfect health, and had been so for the greater part of the previous fifteen years.

The above case attracted my attention so much, that I recollect the circumstance as well as if it had happened yesterday. I laid my wrist in the hollow across the parietal bones, and it took very nearly the upper part of my wrist to be equally on a level with the os frontis and the occipital bones of the head. This case has almost done me more good than five years' study at the Edinburgh University; it taught me, in all surgical cases, not to be rash or too ready to interfere with nature's work: in truth, had it not been for this single and truly interesting case, many a man must have been walking with a timber leg; and more than this, many a person would have had the trepan applied to his cranium. I have seen surgeons when abroad, and who were reckoned men of the first talent, apply the trepan when there was no fracture; and what was worse, when there was no indication of danger. The profession in general are by too far naturally fond of operations; and as my old and respected master, John Bell, used to say, that "he, and he only, is the able surgeon who can see the real necessity of performing an operation." I write this case for the younger part of the profession; and I am sorry to say, that I have delayed it too long. I would advise my young friends not to be too rash or forward in performing operations; I have seen so much of it, that I am positively ashamed to acknowledge one-quarter of the miserable operations that I have witnessed performed both in England and America. I allow that a surgeon of first-rate talents is a valuable character in society, and at all times to be admired, but there is a great evil in being too fond of the knife.

Had D. A.'s case been brought on by slow degrees, I should not have been surprised in the least, as we have known the brain to suffer very materially in such cases, but his was sudden and severe in the extreme, he was knocked down as with a hammer; and how he lived with such a depression of the bones is really to me astonishing. His general state of health was good, and his faculties perfectly entire.

The above case would baffle all the phrenological characters, as the bumps, at least many of them, were destroyed entirely, and still the man had all his faculties complete as before the accident happened. I never had any faith in phrenology; I believe in Camper's facial angle, and that the larger the brain is to the foramen magnum, the greater is the intellect of the person.

When Mrs. Burns died, she was buried in her husband's grave, four hundred gentlemen were at her funeral; and when the celebrated poet's cranium was raised from its resting-place, there was not a hat of all the four hundred gentlemen could enter on it, they were all too small for the skull of the great poet. When the celebrated Cuvier died at Paris, his brain was weighed, and strange to say, that it weighed seventeen ounces; heavier than any brain ever known in France before. Many years back, people who had large heads were considered, and often called thick-heads, dunder-heads, and even blockheads. Science has at last convinced us that they were sadly mistaken in all their calculations.

Sir Walter Scott, with whom I was intimate with, had a remarkably large head, so much so, that any person would have taken him for a coarse Dutchman, and one apparently of little or no interest whatever, at first sight. Dr. Franklin, of America, had a very large head, and almost without any education; but he displayed both taste and genius which are peculiar gifts from Heaven. I am, Sir, your obedient servant,

JOHN ADAMSON.

137, Regent-street.

**** Our correspondent is much mistaken in supposing the above case to be any argument against phrenology. He would be much interested in the perusal of the important volumes of Gall, Spurzheim, and Combe, on the principles of mental philosophy. The above case is one of displacement, and not of destruction, of the brain.

PARALYSIS FROM INJURY IN THE CERVICAL REGION.

To the Editor of THE LANCET.

SIR:—Mr. Charles Lloyd, an Englishman, from the island of Trinidad, called on me at Halifax, Nova Scotia, in the year 1831, showing and stating that he had lost the entire use of his upper extremities, and reporting that about three years previous he had gone into the country on a party of pleasure, and when returning in the night time his horse stumbled, and he was precipitated down a bank sixty feet. At the time he felt no material injury, and he continued in tolerable health for ten months afterwards, at the expiration of which period his sight began to fail him. In the course of a few weeks his sight became very dim and obscure; he then had recourse to medical aid, and at last, when he began to regain his sight, he lost the entire power of his upper extremities, his arms hung by his sides as though they had been tied with whip-cords, and he could not walk without their dangling from right to left; which made a ludicrous appearance, and attracted the attention of every passer-by.

He put himself under two of the most eminent physicians of the island of Trinidad, who supposed that he had been poisoned by lead, although they had the same report from him that I had received. He continued under their superintendence for upwards of two years, in fact, until all his funds were exhausted, and then they advised him to a colder climate. They had burned him all along the spine with moxa, &c., but in place of convalescing he got worse; when at last he determined to leave the island, and try the climate of Nova Scotia. He had hoped that the sea voyage, &c. would recover him, but, alas! in this he was disappointed: he had no idea that he had a diseased action in his system, and that it was necessary to induce a healthy action before he could look for anything like convalescence.

He told me that he had been recommended to call and consult me; he then, in a very serious mood, asked me if I thought I could do anything for him? I observed that I did not know, but that I would examine into his case, and I trusted that he would give me a faithful report, as all would depend on the first report being perfectly accurate and correct.

I at once ordered my servant to pull off his coat, for he was completely helpless; so much so, that he told me that he had often wished himself dead, and that his wife had fed him for many months; in fact, she had to clothe him, and wipe him in every direction. I at once saw with my oculi interni the way of cure certain and safe; and, of course, the sad mistake of his two physicians in the island of Trinidad. They had paid no attention to his fall from his horse: I conceived that although he had remained in tolerable health for ten months after the accident of his fall, that inflammation had been progressing all the time, and in its progress a thickened state of the parts had taken place, which had acted as whip-cords around the nerves that issue from the bones

of the neck, which give vital energy to the upper extremities. I was positively certain that the spinal cord was safe and healthy. I at first thought of inserting caustic issues, but I determined on more simple means. I ordered a blister to be applied to the back of the neck, so as to include all the foramina of the cervical vertebræ, and to be retained *in situ* for the space of sixteen hours. Strange to say, that in twenty-four hours from the application of the first blister, he began to move the first phalanges of his fingers, which he had not moved for years. I kept the parts open for two or three days, then I healed them, and blistered a second time, when he moved all the joints of his fingers. After keeping the sores open as before, I healed again, and the third blister gave him motion of his wrists. I persevered until he had complete motion of his elbow and shoulder-joints.

During the above period I administered doses of calomel and jalap, so as to act smartly on his bowels, and at proper intervals gave him the blue pill. I have rarely seen the latter medicine properly administered. Physicians are often guilty of giving the blue pill, and generally follow it up by a strong purgative; in fact, destroying the very thing indicated by it. The medicine should lay in the system to do its duty; but to run the blue pill through a gun-barrel appears to me ridiculous in the extreme; in truth, the above pill is often given first: whereas the purgative should precede the pill. In fact, in dyspepsia I have often made a cure, where perhaps ten or twelve medical gentlemen have failed, and only with their own medicines, by reversing their practice. They uniformly gave the pill first, whereas I induced a healthy state of the whole viscera by strong purgatives, before using the said pill. The celebrated John Abernethy states positively, in his interesting work, that he is confident as to the good effects of *laxatives;* but as to the full purgative system, he states that he is entirely ignorant: and from this assertion of his, with all his great abilities, I should doubt if he ever made a complete cure of a dyspeptic patient. I have cured thousands; but without strong purgatives I should never have succeeded in a single case. A celebrated author in this city has stated in his works that there is no cure for dyspepsia but travelling.

To return to Mr. Lloyd's case,—when I first saw him his arms were nothing but skin and bone; the muscles of the said extremities were apparently absorbed and gone. He was poor, for he lost his situation; and the doctor's bills took from him all his ready cash.

I took such an interest in his case, that I made him dine with me almost every day. He in the shortest period of time convalesced so very fast, that the case attracted the attention of all the surgeons of the army in Halifax, and particularly Mr. Sharland, surgeon of the 96th regiment, who called and complimented me, at the same time asked if I did not think that the climate had done a great deal for him? I told Mr. Sharland that Lloyd had a diseased action, or that inflammation had caused a thickened state of formerly healthy parts, and they had to be brought back to their original state; and that climate could not act the part of a skilful surgeon; and that in such a state he might travel round the globe to no purpose whatever: and as a proof of it, when practising in the city of New York, I have seen the Yankee doctors ordering their rich patients away to New Orleans, during the winter season, in a complete state of disease; and invariably prognosticated that such patients would either die in the south, or return and die in their own domicile; and I never knew a case wherein I was disappointed.

Suffice it to say, that Mr. Lloyd is now a strong man, and has arms as muscular as any in all North America; and few people have the execution of his fingers. I am sorry to say, for all my attention, that Mr. Lloyd, as an Englishman, has proved very ungrateful: he had a relative who died in England, and left him a very considerable sum of money; he never called on me to see whether I wanted the good things of this life or not. Bad as we consider the Yankees, I have seen them *double their bill*—the real blood of old England will speak out in every quarter of the globe. I am, Sir, your obedient servant,

JOHN ADAMSON.

137, Regent-street, July 6, 1841.

ON THE

CURE OF STAMMERING,

BY THE

REMOVAL OF THE UVULA AND TONSILS.

As we are ever anxious to act justly towards all our correspondents, and to render to each the proper meed of praise for his labours or discoveries, we were somewhat disconcerted on perusing the imputations against our fairness contained in the following letter from Mr. Yearsley. Upon reading the communication from Mr. Poett, it was at once evident that a great discrepancy existed between that gentleman and Mr. Yearsley, as to the results of operations performed by the latter; and we conceived, having the statements of both before us, that our duty to them, and to the profession at large, demanded that we should inves-

tigate some of the cases which had been mentioned as having been relieved or cured by Mr. Yearsley, ascertain the nature of the infirmity under which they laboured, and report upon the present state of the patients. With this view we have probed several of the cures mentioned in Mr. Yearsley's pamphlet, and referred to by Mr. Poett; and we now proceed to lay the fruits of the investigation before our readers, prefacing our remarks with the letter from Mr. Yearsley which prompted us to make the examination :—

To the Editor of THE LANCET.

Sir,—Since I proposed, through the medium of your columns, a new method of treating vocal defects, I have been attacked by the herd of stammering schoolmasters, at all points, who, apparently, fearing their "occupation gone," have, with one or two honourable exceptions, done their utmost to vilify, in the eyes of the public, both my motives and proceedings. My operations have been denominated "cutting and maiming;" "disorganising the throat;" "a bloody operation;" "uvula and tonsil delusion," &c.; and even "Humbug Operations for Stammering," has been permitted to head an article in your own Journal. I have submitted to all this in a philosophic spirit, knowing that an innovator, even in the most humble path, must ever be prepared to meet the hostility inseparable from the introduction of a practical novelty, and which, serving as a touchstone to elicit the truth, is quite as wholesome as the most decided advocacy and support. When, however, an attack is made on my honesty of purpose, and I am charged, inferentially, with publishing wilful misrepresentations, I feel bound to defend myself from the imputation of such grave charges, from whatever source, or from whatever motives they may spring.

At the outset, I beg to protest that in the whole of the cases published in my pamphlet, I did not in any one of them exaggerate the effect of the operations, though I am free to confess I committed an error of judgment in publishing cases too recently operated on, and some of them even under treatment at the time I wrote; but I was led to do this by the abuse which was levelled at me, and by the desire to be as open and unreserved as possible. It has, however, happened, that some of the cases, with favourable results up to the beginning of April, have retrograded; and I must observe that my voucher did not in any instance extend beyond that time. But though some of the patients have fallen back, others have gone on improving to the present period. Another ill consequence has been, that interested persons, bent on misrepresenting the operations, have sought out my cases, and done their best to confuse them into a stammer, for the purpose of afterwards publishing them as failures. Besides this, my patients have been bribed; they and their friends have been written to anonymously, and, under feigned pretences, to obtain admissions unfavourable to my reputation: some have been wrested from me immediately after the operation; the educational system has been put into force with wonderful success; and then, though the same treatment had been tried in vain before, the cases have been trumpeted forth as failures of operative means, contrasted with the miraculous powers of a few minutes' simple teaching.

Mr. Poett, being professedly a curer of stammering, "medicinally and partly philologically," must be looked upon as an interested party. The main charges brought against me in his letter were published some weeks ago in the *Bath Herald*, and at the request of the editor I answered them by letters from the individuals named, which, as you will perceive from the inclosed memoranda, were directly contradictory to Mr. Poett's assertions.

After stating that in fourteen years he has seen more than one thousand cases of stammering, he very charitably attributes my (in his opinion) erroneous views to the want of experience; but I decline to take to myself any such excuse, as in this respect I believe I have had better opportunities of studying than any other person in this country. In six months I have had six hundred stammerers to consult me; I have examined and treated them in the presence of many eminent medical men, whose valuable hints and suggestions, I am happy to have it in my power to acknowledge, have contributed materially to my success. I would admit that the operations I perform are not so extensively successful as I at first anticipated; but I feel well assured the success is in many cases so marked and gratifying, and produced at so little expense of suffering, and the entire absence of risk, or subsequent inconvenience, that henceforth I venture to predict, the removal of diseased conditions of the throat will form a principal feature in the cure of stammering. Later experience has shown me that medicinal treatment is an important auxiliary to operative means, especially in the *choreal* varieties of impediment; and I have to thank the meddling of the elocutionists with my patients for being made aware of the fact that after the operation, which constitutes the removal of a physical difficulty, their plans can often be used effectively, though it is well known how difficult it is to apply purely correctional treatment alone to the management of stammering when it

exists to anything like an obstinate degree. I am, Sir, your obedient servant,

JAMES YEARSLEY.

P. S.—Of three hundred operations performed between Dec. 5, 1840, and April 30, 1841, the results may be thus classified:—

In sixty-three the relief was immediate, complete, and permanent, so as fairly to warrant me in pronouncing them *cured*.

In ninety-two the relief was immediate, and more or less complete, and subsequent medical, surgical, and educational treatment has been extremely beneficial. It is remarkable, that in most of these cases the same educational means had been previously tried in vain. These cases may be considered as *much relieved*.

In eighty no good was apparently effected at the time of the operation, but they were afterwards surprisingly amenable to medical and educational treatment, and may now be set down as *relieved*.

In sixty-five no benefit whatever was derived from the operation, or from any subsequent treatment.

Lastly, in no case have I been able to trace any inconvenience from the operation.

If your correspondent of last week (Mr. Hunt) really possessed any of the physiological knowledge he affects to hold in such reverence, he would have spared the readers of THE LANCET some of the absurdities his letter contained. Mr. Hunt appears to think my mode of treatment quashed in a most satisfactory manner, when he asks, "Are the tonsils given to man for nothing? or are they most important for secretions on which the digestion of food and the health of the stomach are dependant?" And then answers his magniloquent question by rejoining, "You interfere with the offices of the salivary glands, and expect that the stomach will continue to perform its necessary functions." Now, in the first place, the tonsils are not "salivary glands," and consequently no treatment applied to them can interfere with the salivary secretion. In the next place, I never remove tonsils unless those bodies be diseased, when, of course, their secretion is diseased also, and consequently injurious, consisting, in fact, of a thick, tenacious phlegm, exceedingly troublesome, which sometimes becomes purulent, and even produces hectic fever. As a proof of the perfect safety of excising diseased tonsils, I have done so in more than five hundred cases, without producing the slightest injury or inconvenience; and I defy Messrs. Hunt, Bell, Poett, or any other person, to point to a single case where mischief has happened from the operation at my hands. I have as great a dislike as any one to the severe, and in one case fatal, operation, proposed by Professor Dieffenbach; but that eminent man, though so condemned in this particular, and attacked in reputation by a host of petty minds, has perhaps enriched the field of modern surgery more than any other living surgeon; and we must remember that even our own illustrious Hunter was, in his anxiety to extend the usefulness of his art, the author of proposals which produced disastrous effects.

With respect to the case of John Tarr, the boy not only had a stammer, but a thick and imperfect speech. I removed in his case tonsils of large size, which the boy distinctly told me *impeded his breathing*. After the operation I did not see him again, so that I cannot judge of the effects of it; but I do not believe that Mr. Hunt could have promoted the cure in this case unless my operations had preceded *his teaching*. I am warranted in my belief by the fact, that a number of persons have come to me from him unbenefitted; that I have relieved patients on whom Mr. Hunt's "cure for stammering" produced no effect; and in one case that came under my notice, educational treatment had been unavailingly tried *before* the operation, which was performed without relieving; but in this case Mr. Hunt was *afterwards* able to subdue the impediment. When I attempted to learn the particulars of Tarr's being taken from my care after my having only seen him *once*, I found my wishes were frustrated by Mr. Hunt having actually taken him into his house *as a servant*.

We now proceed to examine, comparatively, the statements of Mr. Yearsley and Mr. Poett, and to place them in juxta-position:—

Mr. Yearsley's Statements.

"One of the earliest cases upon which I operated was a respectable young man, named Butler, living at 14, Tottenham-street, Tottenham-court-road. I give a narrative of this case here because the operation was witnessed by some of the members of the Westminster Medical Society. This patient is 24 years of age; his stammer had existed sixteen years, and was invariably aggravated by easterly winds or wet weather. The impediment was, in this case, most severe

Mr. Poett's Statements.

Mr. Poett states that this person is not cured, and, in proof, incloses to us the following note:—

"31, Golden-square, May 8, 1841.

"Sir:—I know not by what sophism Mr. Yearsley has 'laid the flattering unction to his soul,' that he has perfectly and permanently cured me of my impediment. I certainly, while my throat was sore and inflamed, did speak with ease and fluency; but no sooner was the part healed than my

and painful to witness; he frequently felt himself impelled to strike his hand forcibly against his side to assist the vocal effort; he rarely spoke without ducking his head forward, so as to bring it nearly to a right angle with his chest. I removed the uvula, and the relief was instantaneous. Upon asking him how he felt, he raised his head and answered, 'Pretty well, sir.' After a moment's surprise at the readiness with which these words escaped him, he sprang up from the chair, exclaiming, 'Oh, sir, I feel I can hammer away now.' He talked afterwards with the gentlemen present without difficulty, and with only the most trifling hesitation. A few days after the operation, he received intelligence of the dangerous state of a near relative, which deeply affected him, and, for a time, occasioned a slight return of the impediment; but this speedily passed away, and he may now be pronounced quite free from his former malady."

Mr. Yearsley incloses to us the following letter from the same individual:—

"24th May, 1841.

"Sir:—In reply to your queries with respect to my case, as published in your pamphlet, I beg to state, *that case is perfectly correct.* I instantly felt, and still feel, a relief from the catch which appeared to prevent my utterance; and though, from ulterior circumstances, the impediment has in a slight degree returned, I have no hesitation in saying I would again undergo the operation for a similar relief. Wishing you every success that you may wish yourself, I remain, Sir, your obliged and grateful servant,

"GEORGE BUTLER.

"J. Yearsley, Esq."

We find that George Butler, clerk to Mr. Arnold, of Golden-square, still stammers very badly; he states that the "operation will not cure stammering," but he "thinks himself a little better." Says that he used to "duck" his head convulsively before the operation, of which he has been relieved. While speaking, the nodding, or, as he terms it, the "ducking," of his head is at present very violent.

John Topliss, aged nine years, residing at 1, Hopkins-row, Westminster, tonsils excised Dec. 5th, 1840. Cured.

William Russell, eleven years, Temperance Coffee-house, Broadway, Westminster, tonsils excised. Cured; slight thickness of speech only remaining.

The two boys, Topliss and Russell.—I inclose a letter from the father of Topliss. The boy himself I examined carefully yesterday, and do not hesitate to say that his stammer is gone, though, I have no doubt, that Mr. Poett, or any other person conversant with stammering, might, if they tried to confuse him, succeed in making him hesitate; but this, I believe, might be done to any boy whatever. I confess that the parents of Russell state that he never stammered. I have a letter from them stating that his speech is much improved; and from Topliss's letter it will be seen that he who is a old habit returned. If agreeable, I will do myself the pleasure of calling on you, and be happy to answer such questions as you may wish.—Your very obedient servant,

"GEORGE BUTLER.

"J. Poett, Esq."

[It may, not unreasonably, be asked, which of these two letters signed "George Butler" is a forgery.]

The two boys, Topliss and Russell, are not cured. Mr. Poett incloses the following note relating to the latter:—

"Temperance Hotel, Broadway, Westminster.

"Dear Sir:—In reply to your note, I beg to inform you that my son was occasionally hard of hearing, and had a thickness of speech previous to his being operated on by Mr. Yearsley, and his speech and his hearing are decidedly improved; but I do not consider that he ever stammered.—Your's truly,

"W. RUSSELL.

"J. Poett, Esq."

neighbour and saw the boy very often, never spoke to him without noticing the difficulty.

"No. 1, Hopkins-row, Westminster,
May 25, 1841.

"Sir:—I am happy to have it in my power to say that your account of my son's case is perfectly correct; and with respect to the boy Russell, I have been in the habit of attending the Temperance Coffee-house, and have known him for more than two years; I never asked for a publication or a cup of coffee without noticing the difficulty the boy had in answering; and, in fact, unless he could get near some place to bear upon, he often could not speak. Since you operated upon him there is no longer any difficulty. His friends were not so much aware of his stammering as strangers, but they also now notice a great change in him for the better. I remain your humble servant,

"J. W. Topliss.

"J. Yearsley, Esq."

The boy Topliss applied to Mr. Yearsley, suffering under deafness, for which his tonsils were removed with some benefit. He presents a remarkable peculiarity of pronunciation, which his grandmother called "stammering." When asked what she means by "stammering," the father replies an "impediment or stoppage." In truth, it is an hereditary peculiarity of pronunciation, unaccompanied by the spasmodic action necessary to stammering. The father labours under the same peculiarity, and had a part of the right tonsil removed by Mr. Yearsley, but without any benefit.

From the mother of the boy Russell we have received the following report:—"He is a little relieved in his thickness of speech, but speaks thick still; he never stammered."

With Frederick West, No. 1, St. James's-street, Cannon-street-road, St. George's East, we have not yet been able to communicate.

James Wicton, 28, Marlborough-street, Greenwich, aged 17, stammered excessively. March 9. Uvula removed, with decided improvement. March 24. Says the relief has continued to increase. March 31. Reports himself almost free from impediment. April 4. May be pronounced cured.

James Wicton's case has certainly relapsed, but at the time it was published he gave every indication of complete cure, having remained free from a most aggravated stammer for upwards of a month.

James Wicton is no better, as may be seen from the inclosed note:—

"Sir:—In answer to your note this morning, I write these few lines to inform you that my son has been under two operations, and he is no better. Yours truly,

"Mrs. Wicton.

"28, Marlborough-street, East
Greenwich, May 1."

John Burroughs no longer stammers, but under circumstances when, probably, the majority of us would stammer.

John Burroughs says he is greatly improved, but stammers as usual when nervous.

John Burroughs being from home, his mother stated that he still stammered, but was a little relieved by the operation.

George Nixon, aged 20, No. 6, Phœnix-street, Soho, stammered from infancy. After speaking a few words, he stated that he always felt something in his throat which prevented the issue of the words. In this case the greatest difficulty occurred in pronouncing the dentals. March 16. I removed the uvula, with immediate good effect. The most difficult words are pronounced with ease; in fact, the stammer has entirely disappeared. No vestige of it remains, save a slight tremulous motion of the lips.

George Nixon says he is greatly improved, but stammers as usual when nervous.

George Nixon states that his stammering is the same as before the operation; that he thought himself relieved during the time that his throat was sore, because he was then "*careful to speak slow.*" He believes that Mr. Yearsley intended to be useful to him, for that Mr. Y. said, "If you will come every Wednesday evening, I have an elocution class, and you will be taught that, by pronouncing your words slowly and distinctly, you will conquer your stammering." He says that he knows he can overcome his defect by speaking slowly. "He does not understand about dentals."

William Barr, it appears, gave a wrong address,—no unusual circumstance with gratuitous patients. For two months after the operation I continued to see him, and during that time he remained well, and I have no doubt he still continues so.

Could not find this patient at the address given.

William Dixon's address shall be corrected.

No such person at the address given.

William Briggs, 11, Gate-street, Lincoln's-inn-fields. Stammering in this case had existed from early childhood. He is now nineteen. Great difficulty in pronouncing the labials and gutturals. Always felt an obstruction in the throat, and pain in the chest, on attempting to overcome it. Four years ago had been treated for six months by Mr. Bell, a teacher of elocution, with slight improvement at the time, but afterwards became "as bad as ever." He shook his head convulsively from side to side, and had violent action of the muscles of the face while attempting to speak.

March 9. The uvula was removed. Felt instant relief, and that the impediment had disappeared from the throat. He was able immediately to pronounce difficult words, as "teetotaller," "Peter Piper," "memento," which before the operation had been very painful, and almost impossible.

March 14. Has felt himself daily improving in the use of the voice. A friend, who came with him, bore testimony to the evident and remarkable benefit he had received. When asked to imitate the convulsive movements of the head and neck, he replied that he "had forgotten the way." There had been no return of the motion accompanying his former utterance.

March 21. Reports that he has not been quite so well for the last two days, but is better this morning. The palatine arches being very strongly marked, I divided them with the effect of giving him still further relief; but as the tonsils are enlarged, I purpose on a future day to remove them.

March 27. Reports himself improving from day to day, so that the excision of the tonsils is deferred.

March 30. The improvement still continues.

Not cured (see note).

"11, Gate-street, Lincoln's-Inn-fields,
"June, 1841.

"Sir:—I am surprised to read Mr. Yearsley's account, in his publication, of his successful cure of my affection of stammering. He cut off my uvula and divided the palate arches of my mouth, but without any benefit, and I am now under another person's care. I am, sir, yours, &c.

"W. Briggs.

"J. Poett, Esq."

William Briggs stammers very badly, he states that he is not at all benefitted. He is now receiving the instructions of Mr. Hunt with great advantage. It would be ridiculous to state that his improvement with this gentleman is at all assisted by the loss of his uvula.

Besides the preceding cases, which are referred to by Mr. Yearsley and Mr. Poett, an examination of several others of those reported by the former gentleman, give the following results:—

Mr. Yearsley.	The Lancet.
Thomas Cook, 151, Drury-lane. March 31. Removed the uvula, with instant improvement. April 4. Presents himself greatly improved.	**Thomas Cook stammers as badly as ever; has pain in the fauces when he attempts to swallow hard food, such as crusts of bread.**
Edwin Camplin, 13, Denmark-street, near St. Giles's Church, aged 11. Operation performed, March 9th. March 22. The mother reports him much improved. The parish schoolmaster, ignorant of the operation, had noticed the surprising alteration in the boy.	**Edwin Camplin stammers very badly. States that he is not worse than before the operation; cannot say that he is any better. His father is a congenital stammerer. His mother says that she reported to Mr. Yearsley, a few days after the operation, while his throat was sore, that she thought him better, because then he *spoke but little, and slowly*.**
Charles Wainwright (mis-spelt Waymer), aged 19, residing at 11, Welbeck-street. Operation, March 12th. March 22. Reports himself much relieved. April 6. Nearly well.	**Charles Wainwright states that he was relieved neither at the time nor since, and never returned to Mr. Yearsley after the operation. Used some warm expressions on hearing that he was reported "nearly well."**
Thomas Raymond, 62, Monmouth-street, Seven Dials. March 16. Uvula removed; instant benefit. April 4. Reports "the stammer much diminished, and wonderfully easier in the chest." Is a singer, and feels his voice much improved.	**Thomas Raymond states that he had a pain in his side when he attempted to aspirate a word; that the pain is not so great; so far he has been relieved, but the stammering is exactly the same. For a few days he thought himself a little better, whilst his throat was sore, and he spoke "cautiously and slowly." Mr. Yearsley told him that as he could sing a little, the operation would "much improve" his voice, and that if public singers knew what they were about, they would all have the operation performed; that they would sing much the better for it. He was angry at the report of his singing made by Mr. Yearsley, saying that the answers were extorted from him, and not intended in the view which has been given. He added, that he could always sing or read a newspaper slowly, without stammering.**
Henry Hall, aged 25, 12, Parker-street, Westminster. Uvula excised, Feb. 17, with instant relief. March 28. Improvement continues; considers himself well.	**Henry Hall states that he thought his stammering was better whilst his throat was sore. He is not in the least benefitted by the operation.**
Ellen Hollands, aged 19, 7, Russell-court, Bridge-street, Covent-garden. March 24. Stammered since five years of age. In giving her name, says M—m—a Dollands, and has convulsive action of the hands; and if standing, of the whole body. N—n—n—n—nineteen; for forty, says *thorty*; for fifty, *thifty*; for Peter, says *Theeter*. Removed uvula and left tonsil, with no immediate effect. **March 31. Reports herself much improved. Confirmed by her friend.** **April 4. The friend who came with her, but who does not live in the same house, states that she has seen her daily since the operation, and every time of seeing has been certain of an improvement. She could speak quite freely, and with a very different character of voice to that she possessed before the removal of the uvula and tonsils.**	**Ellen Hollands from home. Her mother states that her daughter is out of health, and is now under the medical treatment of Mr. Yearsley; that she does not know if her daughter be better of her stammering; that she is a poor widow, with two "on 'em," and "having her bread to get, she wishes to give offence to no one."**

It has been ascertained that John Power, W. W. Ralph, James Smith, and James Silcox, were not known at the addresses given by Mr. Yearsley.

We consider that any remarks upon the above cases, or upon the applicability of the operation to the object proposed, would be quite superfluous; we therefore leave the facts, such as we have found them, to the judgment and discrimination of our readers.

TEN GUINEAS FOR CLIPPING THE UVULA.

To the Editor of THE LANCET.

SIR:—In your Publication of the 3rd of April last, you were pleased to insert the letter of a sufferer from the operation for stammering, and hoping the same indulgence may be extended to me by allowing this communication to appear in your Journal, it may be the means of giving a salutary warning, in more instances than one, to several individuals suffering as I am at present.

From my childhood I imbibed a spasmodic closure of my lips, and an equally irregular action of my tongue at times whilst speaking; which, of course, caused an impediment to correct utterance. I placed myself under the care of a gentleman, from whom I experienced great relief, but felt at times a nervous check given to his excellent rules that I could not conquer. In the midst of my attendance on this gentleman, he was seriously attacked with illness; and, about the same time, Mr. Yearsley's wonderful account of the cures he suddenly performed, induced me to wait on him, in the hope of receiving the decided benefit he promised.

I accordingly waited on Mr. Yearsley, and told him how I was affected; that at times I spoke and read as well as any person who never stammered, or when I brought to full recollection the directions given me by the gentleman I applied to; but I found it impossible, under certain circumstances, to bring my voluntary powers to the pitch necessary to preponderate over the involuntary or irregular actions of my tongue and lips; and the reason I called on him was, to know if his operation would be the means of my obtaining that power. He said that it would; and, with persuasion as to the beneficial effects of his practice, I was unfortunately induced to suffer the loss of my uvula, which he snipped off with the scissors. In consequence of this operation, I suffered very much with inflammation of my throat; so much so, that I had to call in a medical gentleman, who attended me for between a fortnight and three weeks; and could not eat a morsel of solid food during that time. On my recovery I called on Mr. Yearsley, to inform him that his operation was a decided failure; and that I felt no better as to utterance, but rather more nervous. He then said, that at a future day he would excise my tonsils. I, however, consulted a medical man, who advised me not to allow such an act to be performed: who added, that I had extremely small tonsils; and that Mr. Yearsley's views being directed to the excision of large tonsils, I was not a case in point. The gentleman said he would accompany me to Mr. Y., to explain the injury committed, and the inutility of depriving me of my tonsils; but he declined doing so, as I had become so visibly worse as to utterance, that I had nothing more to do than show myself to Mr. Yearsley in the state I was after his operation, for which he expected Mr. Y. would feel extreme sorrow. Mr. Yearsley, however, wrote to me, to know how I proceeded as to speech; and I replied, that I was much worse since his operation, and had also got a sort of nasal sound in speaking, which I had not before, and, in short, that the operation was a complete failure. He then sent me his bill for ten guineas, for "a surgical operation and subsequent attendance." This bill I refused to pay, and he has commenced an action against me for that amount; which action I am now defending, and I am determined that the entire transaction shall go before a jury. The claim for a "surgical operation," is for cutting off my uvula; and as for subsequent attendance, I am quite at a loss to know what he means. I called on him only twice, which was to inform him of the failure of his practice with me, which was all that took place between us. I am, Sir, your obedient servant,

J. F. SYMONDS.

20, Featherstone-buildings,
July 5, 1841.

ANEURISM OF THE ARTERIA INNOMINATA.

To the Editor of THE LANCET.

SIR:—The following dissection shows that, although placed so near the heart, a cure might be effected by tying the trunks of the right subclavian and common carotid arteries, leaving the right side of the head, neck, and arm to be supplied by collateral branches, which would ultimately be the case.

John Ferguson, aged 41, of spare habit, of relaxed fibre, by occupation a compositor, came under my care about ten months ago, complaining of something pressing the lower part of the trachea when endeavouring to swallow. He stated that some weeks pre-

viously he had occasion to lift a considerable weight, but felt no inconvenience at the time, until some days after, when he felt a stiffness and pressure at the upper part of the chest, he paid little attention to it, thinking it would go off by the use of dumb-bells; but as it did not be applied to me: I examined him; I found no swelling; pulse natural; bowels rather confined. By ordering him a saline mixture, and a little ointment for the neck, he seemed considerably relieved. When I examined him again, which was about three weeks after, he still complained of the pressure, &c. existing there. I perceived a slight swelling immediately above the manubrium of the sternum, possessing strong pulsations round all its margins; no cough; breathing free; no palpitation of the heart, and rather lively. I then saw it was an aneurism of the arteria innominata, and wished the patient to consult some other surgeon. I met in consultation an hospital surgeon of eminence, when we differed in opinion regarding the case: I insisting the aneurism was confined to the arteria innominata alone, while he imagined it extended to the arch of the aorta, declining, therefore, to give his sanction to the operation which I proposed, of tying the trunks of the subclavian and common carotid arteries, which in my opinion was better worth trying than leaving the patient to his fate.

Not receiving encouragement from this gentleman, as he would not bear me out in my design, I abandoned my project, and allowed my patient to become an out-patient of St. Bartholomew's Hospital, in Dec. 1840, where he was treated very judiciously, as far as internal remedies, venesection, and regimen could go; for, although he was no longer under my care, I still watched the case, which appeared to be going on well. The pulsating tumour that appeared above the sternum became much lessened, but on account of the patient's great debility, and a cold he received while waiting at the hospital, he gradually sank, and died on the 3rd of July, 1841, not from the bursting of the aneurismal sac, but from exhaustion.

I made an examination of the body twenty-eight hours after death: I removed the whole of the anterior part of the chest, dislocating the scapular end of the clavicles. Considerable care was required in dissecting the anterior part of the sac from the manubrium of the sternum, as the adhesion was very firm; the sac was of the size of a large lemon, when it was cut into, and the coagulum removed, which was loose, and quite free from any adhesion to the side of the sac. I discovered a fissure, or opening, in the arteria innominata, midway between its origin and its division into the right subclavian and right carotid; the opening was about three-quarters of an inch in length and a quarter in width; its margins were rounded, as if it were a natural opening; the aorta was sound; so was the heart, and all the rest of the viscera: there was a considerable effusion of serum into the cavities of the pleura and pericardium, the result of the great debility. I am, Sir, your most obedient servant,

JOHN MAXWELL, Surgeon.

31, Margaret-street, Wilmington-square,
July 7, 1841.

*** Ligature of the arteria innominata has, we believe, in all the instances in which it has been practised, terminated unsuccessfully; and the ligature of arteries upon the distal side of the aneurism has proved equally unsatisfactory. In the above case, our correspondent's good wishes for the safety of his patient would unquestionably have been disappointed.—ED. L.

ON THE

APPLICATION OF THE FORCEPS

IN THE

EXTRACTION OF TEETH.

To the Editor of THE LANCET.

SIR:—It was under the impulse of a firm conviction that much unnecessary pain is daily inflicted, and much risk of serious injury incurred, by the unskilful use of the key-instrument in the extraction of teeth, that I addressed to you those remarks on the superior safety and efficacy of *well constructed* forceps, which you did me the honour of inserting in your Journal of the 19th ult.; and in presuming to offer my opinions on the subject, and in placing my instruments at the disposal of any professional man who might be inclined to inspect them, I was actuated by the hope that I might be the humble means, in some few instances at least, of lessening that amount of suffering which the facilities of our nature entail upon us.

With this object still in view, I refrain from replying to those parts of Mr. Stevens's second paper, which impute to me an extreme degree of ignorance of the anatomy of the jaws; a want of natural ingenuity, too; and shall content myself with endeavouring to rectify the erroneous impression respecting the application of the forceps, which Mr. S.'s version of my statement is calculated to produce.

A reference to my paper will show that my observations applied to the *position and shape* of the fangs of some teeth, in relation to their diameter at the edge of the alveolus, and not to the *general direction* of the fangs, as stated by Mr. Stevens. Again, instead of saying that "the forceps plan can be varied *in transitu* as the difficulties develop themselves," implying thereby, as I understand Mr. S., that one pair being found ineffective that may be laid down, and another and

another yet taken up, which would, indeed, be "a protracted process," I asserted that a *fully sufficient lever power* would be placed at the disposal of the operator by means of the forceps, the *application of which power* he could guide or control as the nature of the case became developed; and in this very point lies one of the chief excellencies of the forceps.

Suppose, for example, an extraction of an anterior or posterior molar of the superior maxilla—with the forceps the operator grasps the tooth in the manner described in my first communication; then making a steady pressure outwards, which the spongy and elastic structure of the external alveolar plate will permit, without occasioning its fracture, the palatine root is detached from its adhesion: a contrary motion towards the original position of the tooth, followed by a firm pull downwards in the direction of the external roots, will, in all ordinary instances, safely and expeditiously dislodge the tooth without fracture of the alveolus, or disturbance of the gum, though certainly it will not cause it to "*shoot out to the other end of the room.*"

Suppose that, on endeavouring to detach the palatine root by pressure outwards, an unusual degree is exhibited, the operator may conclude that this root, in addition to its divergence, is more or less curved at its point; and quickly reversing his pressure, he will first detach the external roots, and complete the extraction in that direction which he finds to be most in accordance with the line of least resistance. Suppose that neither by a proper degree of pressure outwards nor inwards the tooth seems disposed to yield, suspicions of an exostosed or even anchylosed state of the fangs will be excited; and if the extraction be imperatively necessary, the operator will proceed with that due degree of caution which the nature of the case thus developed to him will require.

Now, suppose the key-instrument applied to the same teeth. I believe it is usual (Mr. S. will correct me if I am wrong) to place the fulcrum on the inner or palatine side, and adjusting the claw to the outer side of the tooth as high up as possible (an awkward business requiring a great deal of fingering) to make a blind turn inwards, when in some cases the tooth is cleanly extracted and the gum not much bruised, or lacerated by the pressure of the fulcrum; in others, the point of the palatine root is broken off and left in the alveolus, where it may afterwards produce abscess; in others, again, a portion of alveolus comes away with the tooth, and the patient is told that probably some more little pieces of bone will work out, but he is not to be alarmed, and that when all the pieces have come away his gum will heal: but, perhaps, a fissure of the alveolar process have been occasioned (not an unfrequent result of the application of the key to the inferior maxilla), and then the gum does not heal, nor the patient's sufferings cease, until the whole of the injured portion has exfoliated, and then the patient finds that the removal of the condemned tooth has been effected at a cost of two or three sound ones also; very frequently the tooth is broken off at the neck, and then the patient must either submit to additional clawing and pinching at the lacerated gums, or must carry away with him an inflamed and exposed nerve, which will painfully remind him of its existence each time that he ventures to open his mouth. I do not doubt, and should be sorry to experience Mr. Stevens's muscular powers; neither do I question that he has the right method of using *his* forceps, nor have I to my knowledge in any way impugned his adroitness in extracting teeth, but I do most strongly question whether he has ever seen or used a pair of *properly-constructed* tooth-forceps.

Mr. Drummond's observations in your current Number on the disadvantageous horizontality of the force exerted by that description of key-instrument, which Mr. Stevens so strongly eulogises, shows at least that doctors differ, and, may I not add, patients suffer. This gentleman's recommendation, that if the tooth do not yield to a moderate force with either instrument (in reference to two descriptions of keys), the operation be finished with the elevator or forceps, says more in favour of the latter instrument, than aught that could proceed from the pen of, Sir, your most obedient servant,

W. H. Lintott.

24, Mortimer-street, Cavendish-square,
July 12, 1841.

PROGRESS OF DENTAL SCIENCE IN AMERICA.

To the Editor of The Lancet.

Sir:—At a time like the present, when the subject of general medical reform occupies the especial attention of the profession, and the necessity for providing some protection for society against the inroads of empiricism, becomes daily more evident, it may not be out of place to direct attention to the strenuous efforts made on the other side of the Atlantic, to rescue a most useful, though perhaps humble branch of surgery, from the depth of degradation to which it has been reduced, by the disgraceful quackery of a great proportion of those who profess to follow the avocations of the dental surgeon.

After encountering much opposition, and overcoming many serious difficulties, a few of the leading dentists in New York, aided by some equally praiseworthy professional brethren in Philadelphia, Baltimore, and

Boston, succeeded early in 1839 in forming an association, from which, shortly after, emanated the first number of a monthly journal, under the title of the "American Journal of Dental Science;" the avowed objects of the publication being to afford facilities for the diffusion of knowledge in dental theory and practice, and for that unreserved intercommunication of facts between the members of the profession which ever opposes the firmest obstacle to the growth of quackery, inasmuch as one of the strongest distinctive attributes of an empiric is, *to have, or to pretend to have, professional secrets.*

The first volume of this journal has been completed in twelve numbers, and it has been determined to publish the second volume in four quarterly numbers.*

The contents of the first volume have been of an exceedingly interesting and useful character, reflecting the greatest credit on the discernment of the able editors, Dr. Harris, of Baltimore, and Dr. Parmby, of New York.

Amongst the earliest beneficial results of the publication of this journal, has been the complete organisation of the "American Society of Dental Surgeons:" a society which, amongst many other laudable designs, professes its object to be the establishment of dental colleges in the various states of the Union, and ultimately the conferring of a degree in dental surgery on those properly-qualified candidates who may be desirous of obtaining such evidence of their theoretical and practical knowledge.

In November, 1840, the Baltimore College of Dental Surgery commenced its first session, under the guidance of four professors; viz., of dental physiology and pathology, of anatomy and physiology, of practical dentistry, and of special pathology and therapeutics; and this institution is now in full and successful operation. Considerable progress has also been made towards the formation of a similar establishment in New York.

If facts and observations connected with dental pathology may be deemed worthy of a place in THE LANCET, I shall experience much pleasure in offering to your notice occasionally some reports of the proceedings of the American Association, in the hope that a little agitation of the subject may be instrumental in exciting the attention of those eminent members of the profession who are best qualified, by the position they occupy, to bring about an effectual reform in this, as well as other branches of surgery. I have the honour to be, Sir, your humble servant, W. H. LINTOTT.

24, Mortimer-street, Cavendish-square,
July 3, 1841.

* Highley, of Fleet-street, is the agent for London.

THE LANCET.

London, Saturday, July 17, 1841.

IN continuation of the remarks submitted to our readers, on the reporting of hospital cases, we wish to call attention to an article by Dr. COWAN, in the last volume of the "Transactions of the Provincial Association." Dr. COWAN, the translator of LOUIS, and well acquainted with the exact metho of that observer, declares, after considerable experience, that the information required "might be furnished at *a very moderate expenditure of time and trouble;*" and the chief practical difficulty in the way, he say, is, "that of inducing the medical officers of our "institutions to coincide in an uniform and "convenient plan of reporting." We quite agree with Dr. COWAN, that the reports *ought* to be furnished by every medical institution in the kingdom; and it appears to us to be *no longer* "*a question* whether *public charities* should not be *compelled* to keep case-books and registers, and to publish annual abstracts." The public and the profession have a right to know the methods of treatment pursued in the institutions which they support,—to profit by the experience of the medical officers,—and to have access to the facts for the observation of which hospitals present such peculiar facilities. Some measure on the subject will probably be submitted, ere long, to the Legislature: and we shall be glad if this notice of Dr. COWAN's plan induce any of our correspondents to examine the subject more closely, and to offer any suggestions which they have found, by experience, serviceable in abridging the labour of registration, or enhancing the value of its results.

The facts, and the history of every case of disease, present an infinite variety of particulars, a few only of which can be registered. "What facts should be recorded," becomes then an important preliminary question: and as we are speaking here of a general register of all cases, the question is, "What facts should be recorded in all cases?" The answer must, we think, be, "Such facts as "have already been shown by individual "research to be susceptible of extensive "generalisation." The register should, therefore, follow the well-marked indications of science, and be hampered with no unnecessary head of inquiry.

LEFT HAND SIDE.

No.	Name.	Age.	Sex. M.	Sex. F.	Married.	Single.	Residence.	Occupation.	Date of Admission.	Date of Discharge.	No. of Days on Books.	Length of previous Illness.	Total Duration of Illness.	Disease.
1	John Cooper.	20	1	..	..	1	Reading.	Smith.	Jan. 1.	June 21.	20	10	30	Bronchitis.

RIGHT HAND SIDE.

Recovered.	Relieved.	Convalescent.	Left sick.	Incurable.	Irregular.	Died.	Cause of Death.	Made in or Out-patient.	Treatment, Prescriptions and Directions of Medical Attendant.	Observations.	Dates of Visits of Medical Attendant.
..	..	1	..	..	..	..	.....	1	Mercury, local depletion.	.....	

The preceding is, with the exception of three alterations which have been introduced by ourselves, the table which Dr. Cowan recommends, the spaces in the book being made proportionate to the nature of the facts.

The alterations and additions which we have made, consist in the substitution of *length of previous illness* instead of "anterior duration," and in adding the headings of *dates of visit of medical attendant*, and *prescriptions and directions of medical attendant*. Consequently, it is quite evident that the most copious space in every table should be allotted to the "prescriptions and directions of the medical attendant." In some instances, when it is quite evident that the cases will prove protracted ones, the description of the treatment should be at once referred to an appendix; thus making in the same book a double reference to such cases, the second reference merely giving the number of the case, and a description of the treatment in detail. At the conclusion of the treatment a summary may be thence made, and transferred to the proper allotment in the table.

We are decidedly of opinion that the importance of the two last-stated headings, when considered with regard to hospital, infirmary, dispensary, prison, and workhouse practice, cannot be over estimated. Without them we should consider the table to possess little or no value, and often it would prove to be even worse than useless.

The influence of *age* upon life has long been known in a vague way. But Mr. Edmonds first showed that the mortality of cases at different ages is regulated by a specific law; and that it increases after the age of puberty 34 per cent, every ten years. At the London Fever Hospital, 14.3 in 100 persons, aged 20—30 years, died; 19.5 in 100, aged 30—40; 26.2 in 100, aged 40—50; and 35.6 in 100, aged 50—60. The practitioner may, therefore, expect to lose, under the same system of treatment, nearly *twice* as many cases at the age 40—50, as at the age 20—30; a difference which cannot assuredly be explained by a difference in the strength of the two classes of persons. The same law has been found to apply to the surgical cases treated in the London Hospital; to the cases of small-pox at the Small-pox Hospital; and to 14,590 cases collated by Dr. M'Divitt at the Canterbury Infirmary. This is one of the most important medical discoveries which have been made in the present century. It was at the time clearly set forth in The Lancet. Why it has never been noticed in the Retrospective Addresses of the authors of those compilations, we do not know. It has, perhaps, not been understood by Dr. Scott and the other retrospective gentlemen; although its appreciation requires little more effort of the brain than do the small and uncertain details of the unscientific physiology and pharmacy on which they have expended so many useless pages.

The propriety of recording the "sex" is obvious; but "marriage" is a social circumstance which probably exercises little more influence than the electoral franchise, on the course of diseases. Two columns are appropriated to the "residence" and "occupation," which should be retained, notwithstanding the immense difficulty of deducing from them any important results, in the present stage of medical etiology.

Dr. Cowan devotes five columns of the register to the "duration of the disease," which is of great importance, and has been found to be regulated, like the mortality, by mathematical laws. The ten columns for the "disease," "cause of death," and modes of discharge, may probably be modified with a slight advantage, by substituting as a heading "secondary diseases" for "cause of death," convalescent," "incurable." The "pneumonia" occurring in measles, or in hooping-cough, the dropsy in scarlatina, the complications in renal disease, the erysipelas and purulent absorption after injuries, are examples. It is exceedingly difficult to state the "treatment" in a tabular form, with any degree of precision or conciseness; the *quantity* of the active remedies administered, such as calomel, opium, arsenic, nitrate of silver, quinine, potassio-tartrate of antimony, &c., with the number of doses; and the quantity

of blood abstracted, may, however, be recorded in many cases. To them "number and measure" are applicable.

Dr. COWAN suggests "headings for cases" in dispensary practice, with the following remarks:—

Name	No.	Age	State
Occupation	Residence		
Anterior duration	Admitted	Discharged	Days treated
Cause	Hereditary	Result	
Diagnosis			
Observations			

"The remainder of the sheet is to be divided by a central line; one side for observations, the other for treatment. When bound, they form a convenient case-book, and when separate are well adapted for dispensary practice. Patients attending the institution should leave them on the spot, and if seen at home should always have them ready for the medical attendant. If kept distinct for each medical officer, and filed as the patient is discharged, no confusion would result. The convenience of the practice is great, saving trouble and assisting the memory."

If hospitals offer peculiar facilities for studying pathological anatomy, private practice opens a still wider and more useful field of inquiry. It is to the general practitioners of the country that we now look for facts, and for any real progress in the science of disease; they see all cases indiscriminately, and treat persons of all ages, in every variety of circumstances. They see cases at their commencement. We cannot, then, too strongly urge upon general practitioners the utility of keeping registers of all their cases; they would thus be able to determine the prevalence of diseases in every district of the country; the mortality and duration of cases; the rate of mortality and recovery at different ages and in different stages of the disease; the effects of modes of treatment, and a variety of facts which are at present either unascertained or imperfectly understood.

In addition to the register of *cases*, the practitioner should endeavour to ascertain every five years the amount of population upon which he is called to attend: this could be easily done in country districts; and he may make out a list of the ages and other circumstances, at the same time. Twice a-year at the least—on Dec. 31st, and June 30th—or on every *quarter-day*, a list of the names of *patients* actually ill, with the sex, age, disease, and stage of the disease (stated in days or years), should be entered in a book kept for the purpose; and from this list the average numbers of males and females constantly sick at each age, labouring under different forms of disease, and at each stage of the disease, may be determined. The results deducible from these enumerations, taken conjointly with the register of cases, would be of incalculable value; and at the end of every five or ten years might be published in the medical journals.

Lord HERBERT, of Cherbury, who had paid a good deal of attention to physic, recommended every noble family to preserve histories of the diseases and infirmities with which their members were visited, in order to put future generations on their guard, and to enable them to profit by the experience of their ancestors. What an invaluable legacy would not the register of cases, and the pathological history of patients, treated during thirty or forty years by the medical practitioner, be to his son and successor! In the sale of practices, the possession of the books forms an important element; but it would enhance the value of the succession, and be of real benefit to the patients, if the registered records of cases were preserved with the same care as the prescription-book and the ledger.

Dr. COWAN makes some judicious remarks on the registration of *private practice*:—

"The last point to which we would advert is the registration of *private practice*. 'This is the field,' says a writer already quoted, 'from which the richest harvest of useful statistical facts may be reaped; it is only necessary that ten or twenty practitioners, situated however remotely, but all living in town or country, should combine to form a collection of facts sufficient to show the frequency and mortality of every kind of disease in different classes of society.' Private registration has, however, been seldom made available for deducing general results, though all must admit that the copiousness and accuracy of the materials *exceed those from all other sources put together*. This is, no doubt, partly attributable to the want of duly estimating the importance of numerical results, and, as in the former instance, to the absence of some uniform method of registration. The register we have recommended for our public institutions may, with very slight alterations, be adapted for private use. For this purpose it is only necessary to devote the left-hand page, after the last column for result, to 'treatment' and 'observations.'

"We have ourselves adopted the plan during the past year, and are, therefore, competent to express an opinion on some of its advantages. It gives additional interest to daily duty, and converts into materials of real use those heavy, non-remunerating duties which young medical men, and young physicians in particular, are called upon to discharge. It ensures greater accuracy and consistency in practice, and avoids much trouble and re-questioning, by recalling briefly the leading features of the case, with a short abstract of the means we are employing. No one can possibly recollect the history of every patient he is daily called upon to treat; and no one has either the time, courage, or perseverance, to refresh his memory by continually-renewed investigations. The irregularity of attendance, the chronic nature of many diseases, the frequent return of the same patient, at different intervals, for a similar or different complaint, all increase the difficulty and importance of being able to refer to previous history and treatment. On the other hand, for all practical purposes, the necessary details to be registered are fewer than what at first might be supposed, the memory easily filling up what a brief outline has traced. The labour involved is very inconsiderable when once a habit and method are acquired; though, like every other occupation of which the benefit is remote, both zeal and perseverance are necessary."

THE MEDICAL SOCIETIES.

THE session of the medical societies closed on Tuesday week last, with a meeting of the Medico-Chirurgical Society, a report of which appears in this week's LANCET. How far the science of medicine has been benefitted or advanced by these meetings, we leave our readers to decide, having placed before them the reports of all the proceedings which have taken place. In conformity, however, with our annual custom, we shall make a few observations on the government and conduct of the institutions in question, and the influence which such government and conduct appears to exert on their usefulness. With regard to the Medico-Chirurgical Society, we have still to complain of the uncourteous practice of keeping invited guests waiting in an ante-room, until *permission* has been formally granted to them from the chair to "be present at the meeting." The ballot-box also still goes round during the reading of the papers by the secretaries, to the great disturbance of the auditory, and the fearful mutilation of the papers. Surely some mode could be devised by which this serious evil could be prevented; an evil which is the frequent subject of just complaints from authors. We have formerly spoken of the great injury which the productions of an author sustain by his lucubrations being read by the secretaries; for, although those gentlemen use every exertion, in the most praiseworthy manner, to read the papers accurately and distinctly, they cannot be expected to be always able to decipher the hieroglyphical handwriting of some of the contributors, any more than that they should have it in their power to revive into distinctness the smeared and obscure pencil interlineations which occasionally are found in the papers. An instance occurred at the very last meeting of the society illustrative of this evil. A paper was being read from the "pen and pencil" of a very distinguished physician, on a very interesting subject. The first few pages of the manuscript were well written in ink, and

"All went SMOOTHLY as a marriage bell;"

when, lo! a pencil mark, somewhat indistinct, presented itself: a rather closer approximation of the eye to the paper was sufficient to conquer this difficulty, and again for a page or two the reading was sufficiently fluent and distinct to enable the listener to *guess* what the author probably intended to communicate. But again appeared the "fatal handwriting,"—there was a pause; the gas-light was turned into greater brilliancy; the worthy secretary

rose from his seat, and placed the paper near the light: he made out what he considered to be the words *written*, read them, and proceeded. But the interlineations became more frequent, the pauses longer, and the merriment of the audience was becoming too obvious to be concealed, when the happy expedient was hit upon of giving up the fruitless task of deciphering the manuscript, and deciding that the paper "should be *considered* as read."

This was, no doubt, a very facile way of getting out of the difficulty, and would be worthy of being styled ingenious, only that it was not original. The late comedian Mathews used to tell the story of two men, quarrelling, each

"Anxious to wound, and yet afraid to strike;"

when one of them in a great passion said, "Sir, I have the will to thrash you, therefore you may *consider* yourself as thrashed." The other, in a still greater fury, exclaimed, "Sir, I have the will to murder you; *consider* yourself as dead."

Turn we from these strictures to a more pleasant task, that of bearing testimony to the earnest desire which has been evinced by the present and late presidents to promote full, free, and fair discussions. Indeed, the society owes a debt of gratitude to Sir B. Brodie, not only for the active part which he has himself taken in the discussions, thereby setting a good example, but for the extent to which he has brought out the opinions of the practical men at the meetings.

Dr. Williams has expressed his opinion that the society is "chiefly valuable as a debating society," and has acted up to that opinion. Some sessions ago we pointed out the dulness which pervaded the meetings, from a want of discussion, and we stated that the numbers present would be increased, and the proceedings rendered more attractive, by the freer communication of opinions. The result has justified our statement; the meetings have been crowded; the discussions have been interesting, attractive, and valuable. Whatever objection some of the members of the society have to free discussion, it is certain that they have not been successful in forming just ideas of what is beneficial to the society. Papers mumbled over, and followed by silent listeners, may do for the College of Physicians, "poor even to bankruptcy," not only in its funds, but in its usefulness and scientific productions; but to keep up a decent attendance of members at the Medico-Chirurgical Society, there *must* be discussion.

The withering influence of the "silent system" was well pointed out by the president of the society, as evidenced in the venerable institution alluded to, and of which he is one of the staunchest conservative fellows!

We spoke last year of the time that had been wasted in the announcement of new books, by reading their titles at full length; an evil which has been much less prominent during the past session.

Before leaving this society, one word to the contributors. Many of those gentlemen damage their own productions, and injure the society, by waiting until nearly the close of a session before they send in their papers; the consequence is, that at the beginning there are no papers for reading, and at the ending the papers are so numerous that they *cannot* be read.

The Westminster Society has gone on prosperously during the past session: the governing body of the society shows the greatest liberality with regard to the papers read, and to the discussions which follow. But this liberality, or rather carelessness, of the committee, has been the means, during the past session, of fostering more than one species of charlatanism. Papers have been read to the society which, had the governing body done their duty by perusing them before, would have had passages expunged which should not have the sanction of a respectable society. The committee of this society should be more alive to their duties.

The past session was rather more fertile than usual of interesting papers, though we could wish that the speakers would occasionally keep more strictly to the subject matter in debate.

The London Society has had a flourishing season, and will, we trust, regain much more of its former celebrity.

The Medico-Botanical appears to be dying from inanition; and the Hunterian and Harveian Societies continue to be as exclusive as ever.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, July 6, 1841.

Dr. WILLIAMS, President.

On Absorption and Regeneration of the Neck of the Thigh-bone after Fracture within the Capsular Ligament. By W. W. BEEVER, Esq., of Manchester. Communicated by Mr. PARTRIDGE.

THE patient, a woman, aged 73, lived nearly four years after the accident. On examination no vestige of the neck remained, except a triangular portion of the under surface, three-fourths of an inch in length, which, from the obliquity of the fracture, had not been detached from the head. This was articulated by a distinct capsule to a second fragment jutting out from the shaft, and firmly united to it, immediately anterior to the lesser trochanter. This adventitious joint, and a band of ligamentous structure extending from the posterior edge of the head to the capsular ligament, formed the only connection between the head and body of the femur. From the large quantity of callus thrown out by the trochanter and head of the bone, the author infers the possibility of bony union being effected.

Case of Aneurism of the Right Subclavian Artery, in which that Vessel was tied internal to the Scalenus Muscle. By RICHARD PARTRIDGE, F.R.S., Professor of Anatomy in King's College, and Surgeon to King's College Hospital.

The patient, David Hickiman, was a married man, 38 years of age, muscular, of a sallow complexion, and had lived rather an intemperate life. His occupation was that of a grinder and polisher of heavy iron plates; an employment requiring great muscular exertion of the arms. He had been the subject of several slight rheumatic attacks, and once, about a year before his admission into King's College Hospital, he had what he called a fever, which laid him up for six weeks, and was attended with cough and pains about the upper part of the chest. After this illness he was always subject to pains below the clavicle, which were brought on by any unusual muscular exertion. In August, 1840, about five months before admission into the hospital, he began to experience pains along the right side of the neck and over the corresponding shoulder, with numbness of the arm, and an increasing want of muscular power in the whole limb.

About a month after the appearance of these symptoms, a pulsating tumour showed itself above the right clavicle; and as this enlarged, the numbness of the arm and the pains in the neck and shoulder became worse, so that, finally, the man was obliged to abandon his employment.

Feb. 1, 1841. Hickiman was admitted into King's College Hospital. He had then an aneurism of the right subclavian artery, extending from the outer border of the anterior scalenus, which it appeared to overlap, downwards behind the clavicle into the axilla as far as the lesser pectoral muscle. The tumour was slightly compressible, and appeared to contain fluid blood. Upon a careful examination, the right common carotid and the subclavian internal to the scalenus seemed healthy; the arteria innominata was thought to be enlarged, as well as the arch of the aorta; it could not be ascertained that they were otherwise diseased. No disease could be detected in the heart or lungs, though there was pain on percussion beneath the right clavicle. The pulse at both wrists was about 80, full, soft, and regular.

The right upper extremity was somewhat wasted comparatively with the opposite limb. The patient's rest was at night very much disturbed by the pains and numbness of the arm.

The patient was placed in bed at perfect rest, with low diet and occasional aperients.

The pains in the limb were relieved by wrapping it in flannel; and this, with an occasional opiate at night, procured him comfortable sleep.

The patient was bled from the left arm after his admission four times, at intervals of three or four days. After these venesections the pulse always became lower, and they appeared to have the effect of diminishing the pains in the arm and shoulder.

Feb. 20. Mr. Partridge put a ligature on the subclavian artery internal to the scalenus.

An incision was made between three and four inches in length along the clavicle to the centre of the upper border of the sternum, dividing the skin and platysma; the sternal origin and part of the clavicular fibres of the sterno-mastoideus, were next exposed and divided, and then a small anterior jugular vein which crossed the incision; afterwards the sterno-hyoid and sterno-thyroid muscles were cut across, and after some careful dissection the artery was exposed, lying very deeply at the bottom of the wound. The vessel was large, but otherwise healthy; the internal jugular vein and the nervus vagus were drawn to the outer side of the wound, and a strong thread ligature was passed around the artery by means of a common aneurism needle; care being taken to avoid wounding the pleura, which lay immediately underneath the vessel. Upon securing the ligature, pulsation in the tumour and at the wrist ceased.

Soon after, being placed in bed, the man felt sick, and vomited.

In the evening, about four ounces of blood were lost from the small anterior jugular vein, which had been divided during the operation: it was secured with a

ligature. At night the patient complained of pain at the pit of the stomach; this was relieved by an opiate draught, and he dosed quietly until morning, when the pains at the stomach returned severely, accompanied by thirst: it yielded to venesection, but after a few hours recurred, and was not, as before, relieved by bleeding. The thirst also returned, and pain was felt along the right side of the sternum, and the pulse and respiration were quickened. A very faint pulsation was felt at the right wrist, and continued until the patient's death. The symptoms increasing day by day, the patient soon became exhausted; his face was pale, and covered with a clammy sweat; his look became anxious; the pulse small, and very rapid; and the respiration quicker. The thirst was excessive; but all attempts to relieve it by fluids, produced intense pain at the scrobiculus cordis. Temporary relief was afforded by leeches and mustard-poultices, applied to the chest and pit of the stomach, but the pains soon returned. On the 24th of February (at eleven, A.M.) the fourth day after the operation, the man died.

On the 26th, the body was examined as carefully as could be done at the patient's house, where it had been removed by the friends. The aneurism was found to extend from the outer edge of the scalenus to the lesser pectoral muscle; internally, the sac turned over the outer border of the scalenus, and overlapped it. It contained coagulated blood, but no fibrinous deposits, and its coats in some places were exceedingly attenuated. It would have been impossible to have placed a ligature on the artery, either on the outer side or behind the scalenus. The ligature was found on the artery, midway between its origin and the inner border of the scalenus anticus. The nervus vagus, the recurrent nerve, and the pleura, were uninjured.

In the chest, on both sides, were found old adhesions, between the pleura costalis and pulmonalis, with serum in the cavities of these membranes, but especially on the right side of the chest, where the pulmonary portion of the pleura was slightly coated with recent lymph. There were tubercles, in a quiet state however, scattered through the upper lobes of both lungs. A small quantity of serum was found in the pericardium, and its inner surface was coated with a thin layer of recent lymph. The heart, arch of the aorta, arteria innominata, and both common carotids, though rather larger than natural, were healthy. Three small deposits of pus were found in the cellular tissue near the wound, and along the anterior mediastinum: they were unconnected with each other. The wound itself looked healthy. No clot existed, either in the subclavian artery or in the vessels springing from it. None of the veins were inflamed. The stomach appeared quite healthy.

The author, after detailing the case, states his reasons for putting a ligature on the subclavian artery, internal to the scalenus, in preference to any other operation. He next proceeds to take a review of the symptoms, and the probable cause of death, and compares them with those which were observed in other cases in which this operation had been performed.

Case of Fatal Encephalitis, with Hemiplegia, immediately excited by Cantharides, in consequence of intense Predisposition from Basilar and Internal Carotid Aneurisms. By P. W. KINGSTON, M.D., Physician to the St. James's and St. George's Dispensary.

James Hullah, between fifteen and sixteen years of age, shoemaker, admitted Dr. Kingston's patient at the dispensary, Oct. 17, 1836.

He has for three years and a half had a throbbing tumour at the right side of the neck, which has gradually reached the size of two-thirds of an orange, but has otherwise been considered strong, and free from ailment, till this morning, when he was suddenly seized with vomiting and with numbness, and almost total loss of power of the trunk, the right arm and leg, the right side of the mouth, and the tongue. Pulse 80; bowels confined for four days. He died in thirty-eight hours and a half: during this period the urine was almost entirely suppressed; the vomiting continued frequent; there was occasional suspension of respiration, followed by spasm of the larynx: he lost, after a time, the power of deglutition, and became by degrees completely comatose.

It was ascertained that the night before the seizure he had taken some Spanish fly in an apple. The body was examined sixteen hours after death. Patches of the mucous membrane of the stomach presented a degree of redness, softness, and elevation, which contrasted strongly with the appearance of the adjacent parts. The spleen was softened. The kidneys were much congested, and their cortical portions softened: the pelvis of the right was filled with a nearly opake, white, flaky fluid, of creamy consistence. The mucous membrane of nearly half the bladder was deeply reddened and much softened. There was a large aneurismal dilatation of the right internal carotid artery; and one of the basilar artery, of the size of a moderate walnut, which appears to have formed gradually, and without rupture of its tunics. The pons Varolii had become flattened by the pressure of the basilar aneurism, and was much softened for the depth of a quarter of an inch. The right lateral ventricle contained an ounce of limpid serum, the left none.

In his evidence given at the coroner's inquest in this case, the author commented upon the fact, that the fatal termination immediately occasioned by cantharides would not have resulted from so small a dose, but for the predisposing causes here noticed. And he points out the application of which this kind of reasoning is capable, in many trials for murder.

Two Cases of Dislocation of the Tendon of the Long Head of the Biceps Humeri from its Groove. By JOHN SODEN, Esq., Jun., of Bath. Communicated by Mr. PARTRIDGE.

The first case is that of a man of advanced years, who injured his right shoulder by falling upon his elbow: six months afterwards he sustained a second accident, a compound fracture of the skull, of which he died; and an opportunity was thereby afforded for examining the nature of the first injury. The symptoms of the injury of the shoulder were always obscure, on account of an alteration in the relative positions of the bones of the joints, which did not, apparently, depend upon fracture, and could not be considered to amount to a partial dislocation, to which, however, it appeared to be more closely allied than to any other known injury.

The joint was flattened at the posterior and outer parts, and the head of the humerus was unduly prominent in front, and closely drawn up in contact with the under surface of the acromion, grating against it on motion, and becoming locked with it by the upper edge of the greater tubercle striking against that of the acromion on abduction of the arm.

The underhand motions were not much interfered with, except that the patient had no power to raise any object from the ground, on account of the severe pain induced by exercise of the biceps muscle. On examining the joint, the accident was found to be a dislocation of the tendon of the biceps from its groove, unaccompanied by any injury.

The joint exhibited extensive traces of general inflammation, and the capsule was thickened and contracted.

The author infers that the altered condition of the bones was dependent on the displacement of the tendon, and he explains its influence in the following manner.

The head of the humerus being placed on an almost flat surface, and not inclosed in a bony cavity, is subject to the control of the capsular muscles which invest it on three sides. These muscles may be said to arise from the upper three-fourths of the circumference of a circle, to the centre of which, represented by the head of the humerus, they converge.

To enable the bone to maintain its equilibrium, it is necessary that the capsular muscles should exactly balance each other; and as there is no muscle from the ribs to the humerus to antagonise the upper capsular muscles, it is suggested that this office is performed by the singular course of the long tendon of the biceps, which, by passing over the head of the bone when the muscle is put in action, tends to throw the head downwards and backwards. It follows, therefore, that the tendon being removed, the head of the bone would rise upwards and forwards.

Allusion is then made to the frequency with which injury of the tendon is involved in accidents to the shoulder-joint. A paper by Mr. Gregory Smith, in the 14th volume of the "Medical Gazette," on the "Pathological Appearances in Seven Cases of Injury to the Shoulder," is quoted, to show that in all those instances which were accidentally met with in the dissecting-room, and are consequently without histories attached, the tendon was either ruptured or displaced, and the same altered condition of the bones, as in the present case, was noticed in some of them.

The subject of partial dislocations of the humerus is next considered with reference to the probability of an injury to this tendon being involved in the production of that accident. Only three dissections of partial dislocations are on record; they are to be found in a paper by Mr. Hargrave, in the "Edinburgh Medical and Surgical Journal." One fell under the observation of Mr. Hargrave himself; and the others he quotes from Sir Astley Cooper's large work, and from Dupuytren's "Leçons Orales." In Mr. Hargrave's case the tendon was ruptured; in Sir A. Cooper's case it had been, but had become subsequently reunited, and in Dupuytren's its condition is not mentioned.

The second case is that of a man who, among many other injuries, sustained a dislocation forwards of the humerus. Great difficulty was experienced in the reduction, and after death, for the man only lived a few days: the joint was examined; it was found that the tendon was dislocated, and that it had passed completely over the head of the bone on its inner side, and was lying at the back of the joint. The author attributes the difficulty of the reduction to this complication with the displacement of the bone.

An Account of Two Cases of Aneurism of the Trunk of the Superior Mesenteric Artery; in one of which Jaundice was induced by Pressure of the Sac. By JAMES ARTHUR WILSON, M.D., Physician to St. George's Hospital.

The symptoms which had most attracted attention during life in the first of these cases, had been very severe pain between the shoulders along the track of the sixth or eighth dorsal vertebræ. The patient died,

after an illness of about six months, in a state of great exhaustion, much aggravated by mercurial salivation.

On examination of the body, a large tumour was seen extending from behind the head of the pancreas upwards, forwards, and outwards to the right side. The ductus communis was in close contact with this sac, but was, however, pervious to a probe. The pori biliarii of the liver were universally much enlarged. The heart was small; the membrane lining its cavities uniformly yellow. Tubercles of a consistence like mortar, and of a yellow colour, were observed in the lungs. In the head, the dura mater was unusually yellow; but both tunica arachnoidea and pia mater were free from that colour. The substance of the brain was also normal in colour; but a thin yellow fluid could be pressed from the divided surfaces of many of the vessels. The synovial fluids contained in the cavities of joints was yellow; their cartilages were of the normal colour. The stomach contained thick yellow mucus.

The author observes, that this case may lead us, under similar circumstances, to apply the ear to the upper part of the abdomen, as a means of inquiry; it may also prevent our being taken by surprise, in the event of sudden death: he also remarks on the inefficiency of the mercurial treatment adopted.

In the other case noticed by Dr. Wilson, there was a tumour pulsating in the epigastric region, about the size of a small orange, which, when the patient lay flat, projected to the left of the scrobiculus cordis. When the patient turned to the left side the tumour ceased to be perceptible. On his turning to the right it might again be observed.

Between February 11th, when he was admitted, and July 12th, when he died, he was attacked with frequent hæmoptysis; and towards the last, symptoms of phthisis presented themselves. In the course of this illness there was severe and increasing pain down the dorsal vertebræ, and cramp in the legs; and the tumour became more and more tender to the touch. The aneurism in this case was in the trunk of the superior mesenteric; it was large and kidney-shaped, raising up with it the pancreas, which lay at the upper extremity of the tumour.

The author notices, as distinguishing points in these two cases of aneurism of the superior mesenteric artery, that jaundice was, during life, a symptom of the one, hæmoptysis of the other. In the latter case the lungs, he observes, were extensively diseased by tubercles of the common kind.

Case of Fatal Peritonitis by Effusion of Bile into the Peritoneal Cavity, through an ulcerated Opening in the Gall-bladder. By William Bell, M.D.

This case is viewed by the author as one of rare occurrence; the inflammation which precedes ulceration of the gall-bladder, tending to adhesion of the adjacent viscera with its coats. The facts disclosed by dissection were as follows:—

Effusion of a cinnamon-coloured fluid among the small intestines: convolutions of the bowels glued together by coagulable lymph. The peritoneum investing the convolutions of the small intestines, presenting on their anterior aspect a well-defined, bright-red stripe.

Marks of recent inflammation of the caput coli, and of the peritoneum lining the abdominal parietes; liver not morbid; gall-bladder containing two concretions, and perforated on the side next the stomach by an ulcer of sufficient size to admit a crow-quill.

The duration of the attack of peritonitis was sixty-three hours: its symptoms were not unusual or extraordinary. They were treated first by remedies intended to subdue presumed irritation; these quieted irritability of stomach, but did not relieve the pain. Then leeches, fomentations, and the other remedies, indicated by presumed inflammation, were used. Little relief seems to have been attained until an opiate enema was thrown up. All pain then ceased, and the patient continued comfortable, and apparently in a favourable state, for some hours. The pulse now became contracted, quick, and feeble, without, however, any return of pain: the skin became hot and dry, and the patient gradually sunk till she expired.

The society adjourned until the second Tuesday in November next.

DR. MARSHALL HALL AND HIS CRITICS.

To the Editor of The Lancet.

Sir:—Will you oblige me by the insertion of the following note to Dr. Forbes in your impartial Journal. I am, Sir, your obedient servant,

Justitia.

As I cannot think that Dr. Marshall Hall will condescend to notice the last silly tirade against him by the "boy-critic," Dr. Carpenter, one of the mighty WE's of your Journal (obscurum pro magnifico), I take the liberty of pointing out several inaccuracies in it, which, for the sake of truth, ought to be corrected.

First, Dr. Carpenter says that Dr. Hall has changed his opinion as to the source of the acts of respiration. *This is not correct.* Dr. Hall changed Legallois' opinion, previously pretty generally adopted, for his own, as soon as he applied his discovery of

the reflex function of the spinal marrow to respiration.

Secondly, Dr. Carpenter says that Dr. Hall has changed his opinion in regard to the action of the œsophagus. *This is not correct either.* Dr. Hall at first stated that the action of the œsophagus was one of irritability from the immediate application of a stimulus. He states so still. Facts state the same thing. Dr. J. Reid has shown that the action of the œsophagus is *also* reflex. Both opinions are, therefore, doubtless true, and such is Dr. Hall's view of the subject. This is no change; far less is it inane and disputatious opposition.

Thirdly, Dr. Carpenter asserts that Dr. Hall obtained M. Flourens' disavowal in regard to the discovery of the incident nerves. *This is also incorrect.* M. Flourens' statement was no disavowal, and it was spontaneous. Dr. Carpenter ought to remember this, for it was attested by the Editor of THE LANCET, expressly for his benefit.

Fourthly, Dr. Carpenter says that Dr. Hall aspires to be not only a Harvey, but—oh wondrous!—a Bacon!! &c. &c. All this is so silly, so very silly, that I can only wonder that you, or any one possessed of the slightest common sense, should admit it into a publication intended for a lofty profession.

But though Dr. Hall may not aspire to be a Harvey, Dr. Carpenter may, without presumption, consider himself as a sort of Parisanus redivivus. For the benefit of your readers I copy a description of the original: "Talem adversarium Parisanum Harveius habuit, cui responsum dare certe fuit difficile; non quidem quod gravibus rationibus aut sententiam suam tueatur, aut Harveium redarguat; sed quod ob tortuosum atque involutum scribendi genus, mentem ejus vix assequi possimus: discussa vero verborum caligine, qua, veluti sepia effuso atramento, involvitur, nihil nisi vanum et futile protulisse deprehenditur."

I see Dr. Carpenter has avowed that brainless, heartless abortion the "complete anticipation" paragraph. Worthy offspring of a worthy parentage! only, like the rest, *it is not correct.* "Justitia" knows its real and *worthy* sire.

Lastly, Dr. Carpenter speaks of Dr. Hall's anxiety about "worldly rewards of honour or money." *This is incorrect too.* Dr. Hall, on the contrary, once offered to *sacrifice* his professional emoluments for five years, in order to prosecute his important investigations! When will the Society "for promoting Natural Knowledge" have such an offer again? Dr. Hall thought it right to expose malversation in office. The profession ought to be greatly obliged to him for doing so. As to the rest, there is surely a sly hit—a sort of side-blow—at *yourself!* The rank weed of nepotism is not yet eradicated. *Verbum sat!* My compliments to Parisanus.

P.S.—By-the-bye, how gratified and astonished must Professor Alison have been to see *his* demonstration—that Dr. Hall's discovery was good but old, proved by *yours*—that it was entirely new, but good for nothing! I fancy that Dr. Alison does not thank you for keeping his name before the medical public in *this* matter.

July 8, 1841.

RESUSCITATION IN ASPHYXIA.

To the Editor of THE LANCET.

SIR:—Sarah Lewis, an infant two years of age, daughter of a laundress, residing in the neighbourhood of Clapham, was out with other children at the rear of her parents' residence, in the afternoon of the 7th of July, 1837, when suddenly a loud screaming was heard: the cause was quickly ascertained—a rotten plank, placed over a well in the back garden, and only superficially covered with earth, had broken away, just sufficient to admit the child into the well. She fell to the bottom, a measured depth of seventeen feet, and could neither be seen nor heard. I was quickly summoned, and arrived ten minutes after the accident had occurred: the broken opening to the well was so small, that it became necessary to remove the whole of the covering earth and boards to gain access to it before she could be relieved from her watery abode. She was found lying on her back, submerged in water, measuring two feet in depth and four feet in diameter, apparently quite dead. The body was stripped, was as cold as marble, and pallid, with the exception of the fingers and lips, which were livid. The eyes were partly opened, the pupils slightly dilated, and frothy mucus was issuing from the mouth and nostrils; no respiration or pulsation could be detected; all seemed perfectly lifeless; but the body was not rigid: half an hour exactly had passed away up to this period.

While the child was being relieved from her perilous situation, I got in readiness a large washing-tub, three parts filled with warm soapsuds, at a temperature of about 75° Fahr., in which I dissolved three pounds of common salt. She was placed in this on her back, with her head and chest raised, and the body and limbs well rubbed by two persons, making use of flannel; whilst I kept the mouth and nostrils cleansed, and endeavoured to induce artificial respiration by breathing warm air into the mouth and lungs: at the same time using mechanical contrivances to promote the object in view. Burnt feathers were also an auxiliary, which I had constantly applied to the nostrils.

The child lay in this bath, immersed up to the neck, for two hours, the temperature of which was gradually increased to 110° Fahr., and the friction by means of the flannel perseveringly continued for that time, when happily signs of returning animation evinced themselves. I now, of course, entertained considerable hopes, and therefore steadily pursued the same treatment for some time longer, when gaspings commenced, and something like regular breathing quickly followed. I then administered a wineglassful of weak hot brandy and water, by teaspoonfuls, which seemed entirely to revive her, and afford much additional increase of strength, for she soon began to cry pretty strongly. I now had her rubbed dry with a hot flannel, and placed in bed between hot blankets, and gave her two drachms of castor-oil: she continued crying some time, but was soothed by her mother, and soon fell into a sound slumber. In the space of three hours the oil duly took effect, and she was perfectly recovered, with the exception of great debility, which required about a week's attendance to restore her to her pristine state of health. I have the honour to be, Sir, your obedient servant,

THOMAS SMETHURST, Surgeon.

Spencer-House, West Cliff, Ramsgate,
May 20, 1841.

*** The above case requires no comment; we have, therefore, omitted the remarks of our correspondent.

ICTHYOSIS.

THERE is now exhibiting in London, at the Cosmorama-rooms, Regent-street, a fine specimen of this disease, affecting nearly the entire body, but more particularly the arms and legs—in the person of a little boy, ten years of age. He is called by his exhibitors the "Cambrian porcupine youth;" and is described as "entirely covered with dark horny thorns, resembling the coat of a hedgehog or porcupine." We have rarely had an opportunity of examining so complete a case.

COLLEGE OF SURGEONS.

AT a meeting of the council of the Royal College of Surgeons in London, on Thursday, the 8th inst., GEORGE JAMES GUTHRIE, Esq., F.R.S., was elected president, and ANTHONY WHITE and JOHN GOLDWYER ANDREWS, Esqrs., were elected vice-presidents of the college for the year ensuing.

UNIVERSITY OF LONDON.

OF the eighty candidates who presented themselves for examination at this university, fifty have passed, and the remaining thirty have been rejected.

TO CORRESPONDENTS.

The letter of *Medicus Suburbanicus*, relating to the "Mutual Assurance Society," should have a place, but we object to the ridicule of even a public association, under an anonymous signature, the justice of which we have not ourselves the means of estimating.

Mr. Jacob Bell's Address to the Chemists and Druggists of Great Britain, on the Objects of the Pharmaceutical Society, and the first number of the "Pharmaceutical Transactions," published by Mr. Churchill, have been received.

Mr. Harker's letter is inadmissible. Its publication would lead to an interminable and probably useless controversy.

Medicus cannot practise as an apothecary, without being liable to a prosecution for the penalty named in the Act.

We agree with *Mr. Pinching* that 2s. 6d. per case is "*not* remunerative," but would not discourage practitioners from rendering their services for that amount, until they are, generally, in a position to enforce a just, if not a generous, reward for their multifarious and important services as public officers, and can universally afford to act with the spirited determination of Mr. P.

A Constant Reader.—The peculiarities of temperament are dependent upon the nervous system, and upon the original constitution of the individual. The blood is also amenable to the nervous system, therefore the experiment proposed by our correspondent must, we fear, be unsuccessful.

Mr. Adamson's communication has been received.

We shall be very happy to receive the contribution offered by *Dr. Mackness.*

Chien.—Immediately after the bite, sucking the wound is calculated to be very beneficial; at a later period we fear that no good would result from that process.

Mr. Lord's communication has been received; it shall be published in our next.

Communications have been received from *Mr. Hawkins; Dr. Percy; Mr. Bancks.*

We shall feel much pleasure in receiving the promised communications from our correspondent *A. B.*; and we would thank him to have the kindness to anglicise his prescriptions.

Verax.—Bathing in cold water, when the powers of the system are sufficiently strong to bear it, is an excellent tonic. Its good effects, however, like those of all good things, are limited; if the remedy be used in excess, it is undoubtedly injurious. If a man employ his muscular system for an hour in the water with strong exertions to swim, he will be as much fatigued as if he expended so much muscular force on the land, but no more. Under such circumstances, bathing must necessarily be depressing to the energies of the system.